

American Forests



APRIL 1938

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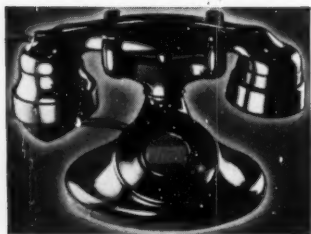


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COMING

With many members of The American Forestry Association planning to attend its 63rd Annual Meeting at Old Point Comfort, in Virginia, early in May, the story of the Colonial National Historical Park, which will be featured in the May issue, should be of particular interest. The author, Walter S. Flickinger, archaeologist in the Park, will deal with the history and the restoration of this picturesque old region.

The issue will also bring one of the most unusual pictorial stories of the year—"Why Wood is Beautiful," by George Lamb. Here is something truly outstanding. You will not want to miss it.

And then, in complete harmony with the season, will be "Bigleaf Magnolia," by Charles E. Raynal—a study of this most treasured of flowering trees. Also there will be "Where Conservation is Commonplace," by Albert A. Richards, and a continuation of "Historic Lumber Towns" by Stewart H. Holbrook.

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The Editors are not responsible for loss or injury of manuscripts and photographs while in their possession or in transit. All manuscripts should be accompanied by return postage. The Editors are not responsible for views expressed in signed articles. . . . Notice of change of address for AMERICAN FORESTS should be received by the tenth of the month preceding issue.

Member A. B. C.

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G. W. Minier
President, The American Forestry
Association, 1886-1887

OUR PRESIDENTS

Mr. Minier was born at Ulster, in Bradford County, Pennsylvania, October 8, 1813. He was educated in the common schools and in famous old Athens Academy. Going to Illinois in 1837, he actively engaged in educational work and preaching. For over fifty years, he was intensely interested in farming and agriculture and on one occasion emphatically declared horticulture to be "the religion of agriculture." He located and platted a village in Illinois, later named Minier in his honor. A strong advocate of tree planting, he reserved a block for a park, which he personally set out in trees. In 1839 he surveyed a portion of the Illinois River and secured by quadrant the altitude of famous "Starved Rock"—found to be ninety-six feet.

He was a warm personal friend of Abraham Lincoln, was conscientiously opposed to human slavery and an early and outspoken abolitionist; and, an ardent advocate of peace in America, he urged the removal of the causes and abolishment of the customs of war and preached living conditions designed to establish the principles of peace.

A charter member of the American Forestry Association and its President in 1886 and 1887, at the advanced age of eighty-seven he was still an Honorary Vice-President. When he died in Chicago, on February 18, 1902, he was the oldest minister in the Christian denomination.

■ Hon. George W. Minier, of Illinois, followed Judge Warren Higley, of Cincinnati, as President of the American Forestry Association. He was elected at the Fifth Annual Meeting held at Denver, Colorado, on September 16, 1886. At that time, the efforts of the Association were directed to building up an informed public opinion in order to secure much needed legislation by the States and the National Congress to promote tree planting and to provide better protection of the forest resources of the country.

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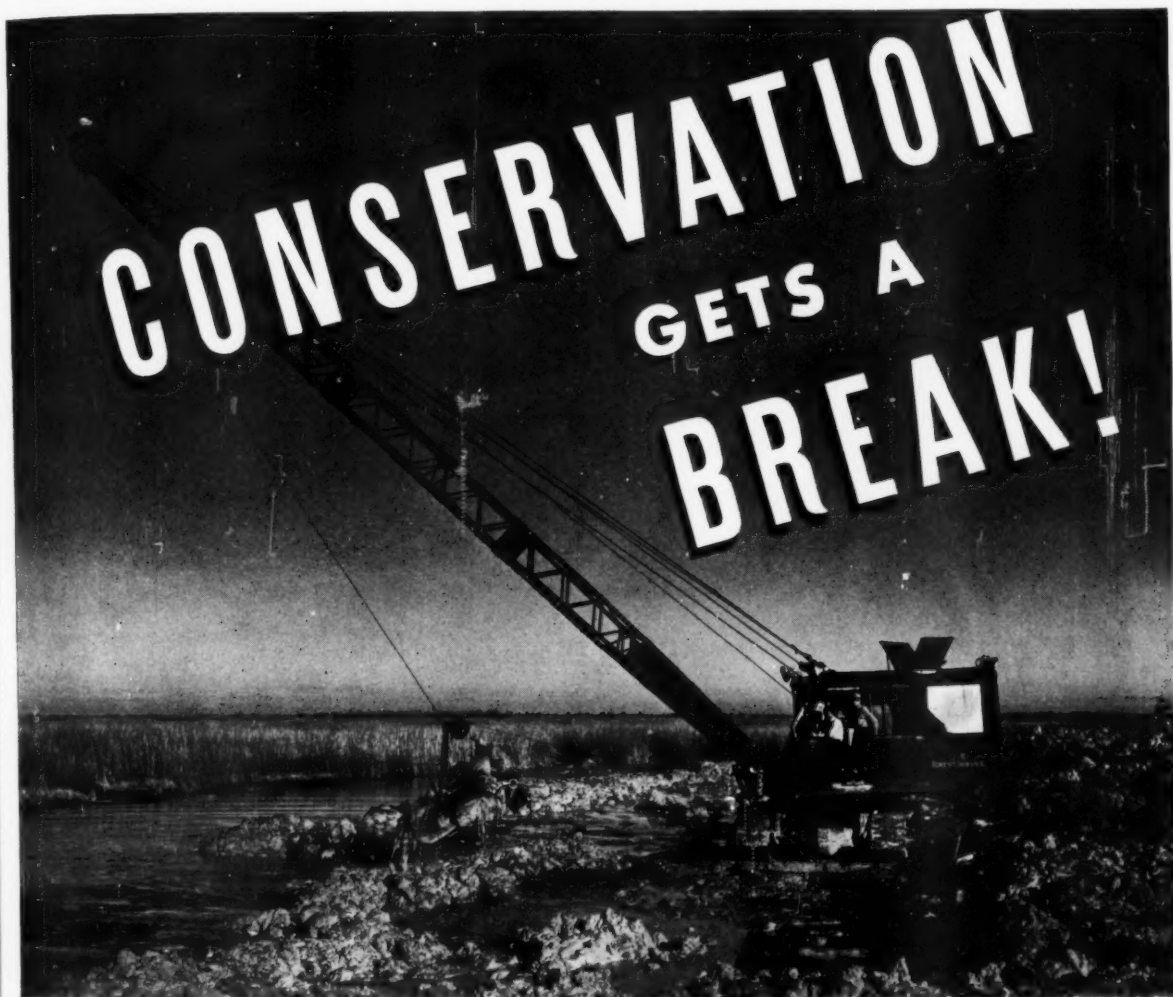
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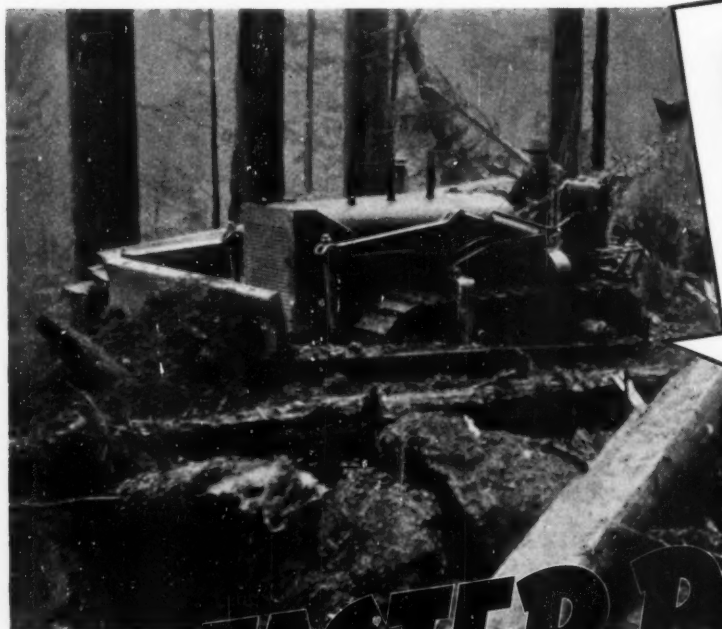
Here are engines built for thousands of hours of brutal work . . . for digging, lifting, and moving punishing loads. Here, as the U. S. Bureau of Biological Survey knows, is the power that gives conservation a break . . . power that gets jobs done quickly, done thoroughly . . . and saves money that will go into more projects for preserving our forests and fowl!

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An amateur can, after reading it through, qualify (as to theory) as a gardener, and forester. It's practical, too.

Large pages (52) and 100 photographs, in black and color, complete accurate descriptions that tell the whole story. No book published covers all the points described! Each tree and shrub: how hardy (map)? Color? When? How large? What soil? Many charts, tables, etc. As many words as a 200-page novel.

Yet, of course, we are in business and quote prices—low ones; we want to stay in business, so the quality is good. Many sizes of each plant; small for economy, large for quick effects.

Altogether, we suggest you write for a copy. The usual charge is 50 cents a book, but one copy sent free if you write now and mention AMERICAN FORESTS. Ask for the 1938 Short Guide.

Why Wait Years for Results?

The ordinary private planter is often disappointed, after planting tiny evergreen seedlings, by the long years of waiting before they are large enough to show a showing. We have a large assortment of trees, five to ten years old, at Surprisingly Low Prices! Ready now to grow a foot a year.

Scotch Pine—12 to 20 inch, XX at \$95 per thousand.

Norway Spruce—8 to 14 inch, XX at \$110 per thousand.

Douglas Fir—8 to 15 inch, XX at \$110 per thousand.

May be sold in 10 years for Xmas Trees; in 20 years for Pulpwood or left to make timber. They will, if you wish, at least pay taxes and interest on idle land!

Profits Without Lifting a Hand!

The evergreens named above require no annual labor bill—plant 'em and leave 'em. There are other ways of obtaining even greater profits from idle land without large investment.

Grafted Nut Trees, set 12 to the acre, will produce in ten years an annual crop worth about \$3 per tree, after subtracting cost of gathering and marketing. This will rise to \$10 per tree in a few more years. Plant a thousand trees and figure it out!

Thomas Black Walnut—3 to 4 feet, \$17.50 per dozen.

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(A few of the newly developed hybrid nut trees or Blueberry grafted plants will at least provide food for your table and beauty for your land. A larger planting will yield a living!)

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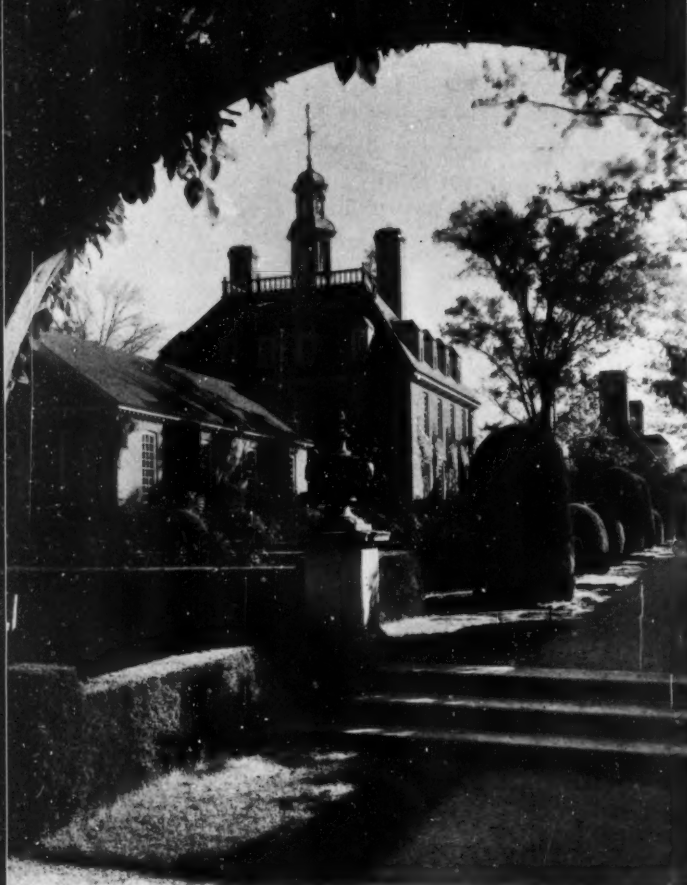
Rhododendron Maximum } 25 for \$7; 1,000 for \$170.
or Mountain Laurel } Showy clumps in 4 years!

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Courtesy Virginia Conservation Commission

Formal gardens of the restored palace of the Royal Governors at Colonial Williamsburg

HISTORY, romance, nature, these make Virginia one of the most appealing states in the country. And no small part of each is locked up in the so-called tide-water region where the James, York and Rappahannock Rivers empty into Chesapeake Bay, and where The American Forestry Association will hold its 63rd Annual Meeting on May 5, 6 and 7.

Williamsburg, Yorktown, Jamestown, Fortress Monroe, Dismal Swamp, these are names, among others of the region, around which the early history of the nation was written, and over which romanticists have dreamed for several centuries. And nature, ever present, has rooted and sustained them all.

Thus in holding its meeting at Old Point Comfort the Association is not only inviting its members and others to participate in discussion of vital and timely forest and conservation subjects, but is making it possible for them to see and enjoy one of the most beautiful and interesting regions in America. Special arrangements have been made for tours of Williamsburg and Yorktown, under the guidance of the Colonial National Historical Park and the Colonial Williamsburg Restoration. Similar excursions have been planned for Dismal

COLONIAL VIRGINIA TO BE SCENE OF ANNUAL MEETING

One of the Most Beautiful and Historic Regions of America—Old Williamsburg, Yorktown, Dismal Swamp—to Share the Spotlight with Currently Significant Conservation Subjects of Pulpwood Development in the South and Public Regulation of Private Forests at 63rd Annual Conference of The American Forestry Association

Swamp, and for a visit to a modern pulp and paper plant, along with planing and sawmills, at Franklin—a touch of the vitally new South, in the seat of the old.

With the picturesque Chamberlin Hotel, facing Chesapeake Bay and Hampton Roads, as headquarters, the meeting will get under way on Thursday morning, May 5, featuring addresses and an open panel discussion on the currently significant subjects of pulpwood development in the South and public regulation of private forest operations. The nation's leading authorities on the subjects, representing both public and private interests, will take part in this important conference. There will also be opportunity on this day to enjoy the various recreational facilities of the Hotel—golf and swimming—and to visit Fortress Monroe and the famous Mariner's Museum at Newport News. In the evening distinguished speakers will address the annual Association Banquet. On the program will be music by the famous Hampton choir.

Friday, May 6, will be devoted to a field trip to Colonial Williamsburg and Yorktown under the guidance of the Colonial National Historical Park and the Colonial Williamsburg Restoration. At Williamsburg the conference will be served an outdoor luncheon on the campus of old William and Mary College. The history and restoration of the first capital of the United States, and that of Yorktown, scene of the surrender of Lord Cornwallis to General George Washington, will be interestingly explained by staff members of the organizations concerned. In the evening, at the hotel, an unusual motion picture program has been arranged, featuring the film "Men and Trees."

On Saturday, May 7, the conference will visit the forest operation of the Chesapeake and Camp Manufacturing Companies, at Franklin, inspecting a modern pulp and paper plant, as well as planing and sawmills. In the afternoon, following an outdoor luncheon, the party will enter Dismal Swamp, going to Drummond Lake by means of a logging (*Continuing on page 185*)

IMPORTANT NOTICE

By recent action of the Board of Directors, resolutions to be considered at the Annual Meeting of The American Forestry Association should be sent to the Chairman of the Resolutions Committee, at Association Headquarters, 919 Seventeenth Street, Northwest, Washington, D. C., not later than four weeks before the date of the meeting. Otherwise the Resolutions Committee is not required to consider them.

THE EDITOR'S LOG

For the present generation with its soft and ordered ways, Stewart Holbrook's series of articles, "Historic Lumber Towns," the third of which appears in this issue, provide a colorful insight into lumber days when rugged individualism was at its height. Each article is a high-light in a coast to coast panorama of timber harvesting unequalled anywhere else in the country. Those who desire to fill in the gaps between Bangor, Maine, and Grays Harbor, Washington, may now find the filling in a book, "HOLY OLD MACKINAW, A Natural History of the American Lumberjack," just published by the Macmillan Company. The author is none other than Stewart Holbrook himself.

In both his book and articles, Mr. Holbrook deals mainly with men—not forgetting women of a kind—and their exploits in hewing a westward swath through 3,000 miles of forest. The drama of their lives, sometimes going to shocking extremes in its primitiveness, their physical stamina and individual feats with bare hands, calked shoes and steel axes are all there.

But what about the trees they ripped from virgin soils, the logs they sent into whining sawmills? What was the sum total of the labor performed in that wild, ax-swinging march across the continent? This is one of those intangibles, history can never fairly appraise or record.

A glimmering of the task done, however, is to be had from recent statistics compiled by Messrs. Reynolds and Pierson of the United States Forest Service. They estimate that during the 135 years from 1800-1935 the aggregate cut of lumber was 2,200,000,000,000 board feet. A dazzling, incomprehensible figure. Translated into terms of concrete things, it means 120,000,000 frame houses—a house for almost every man, woman and child now living in the United States—or a four-foot boardwalk on which they could walk from the earth to the sun. If all this sawed wood had been laid in a solid pile, it would form a monument one mile square and one mile high, beside which the Pyramids would be mere ant hills.

But there is no standing monument to the toil of the American lumberjack. Some visualize it in the footprints of calked boots across the land; others in the living sap that courses through the veins of 130,000,000 people. Destroyer of a great heritage, the lumberjack was, to be sure, but by the same token, he was builder of a great nation.

Forest history, like the sea, casts up strange bits of driftwood. From a musty file comes this amusing record of days back in the early part of the century when the old forest reserves of the West were transferred from the Department of the Interior to the Department of Agriculture. After the transfer had been made and the reserves given their new name of National Forests, orders began going out thick and fast from the Forest Service in Washington to the old General Land Office supervisors in the West instructing them to get busy and do something to guard the public resources under their care.

Among the orders was one commanding them to take prompt and specific measures against any outbreaks of insects and vermin. Upon receipt of this order, a certain supervisor—now deceased—in Utah, decided the time had come to put his rangers to work. He, therefore, laboriously wrote out the following instructions to them:

"It shall be a part of your duty to climb each and every pine tree in the reserve, and make a close inspection of the insect infestation, if any, created by worms in the cones. Also to report the number of worms at work in the reserve, as well as the number killed by you each day.

"It shall be your duty to inspect each and every head of cattle and horses in the reserve at least once a week, making a report of all contagious diseases and of the number of ticks found on any and all the animals within the limits of the reserve. It shall be a further part of your duty to kill all rattlesnakes, vermin, and anything of a dangerous or pestiferous nature, within the limits of the reserve and to report the number of snake eggs laid in your district each week, and the number destroyed by you on your rounds."

In due course, he received the rangers' reports, each identically worded—"I resign."

Orrin Foster
Editor.



Photograph by Ansel Adams

Nearly thirty miles of paved highway are concealed in this picture of Yosemite Valley—part of the 100,000 miles of roads in California over which the motorist may enjoy some of the most beautiful scenery in the world. Only a few remote areas remain in the State that are inaccessible to the automobile, and these are now threatened by the road-builders. Why, the author asks, should these scattered areas not be maintained in their present wild state for the enjoyment of true wilderness lovers?

ROADS RUNNING WILD

By NORMAN B. LIVERMORE, JR.

THE days of Daniel Boone, Lewis and Clark, Kit Carson and other wilderness trail blazers are long past. Our western frontier is a matter of history. Wild range lands, once the home of the cowboy, have yielded to the fence and plow. And now the back country packer is doomed. He still owns his outfit and roams the wilderness trails with his favorite string of pack mules. But the overwhelming army of autoists is steadily encroaching on his domain, and his back country wilderness areas are yielding to roads running wild.

The typical California packer is one of our few remaining picturesque individuals. He is half-way between the old-time cowboy and the modern "dude wrangler" of Wyoming and Montana. He owns his own outfit, but conforms to no known business methods. He spends the summer and fall working harder than his own mules. In winter, he lives idly on his summer earnings, bothering only to see that his horses and mules are doing well on their foothill range. In the month of May he comes out of hibernation, oils up his saddles, shoes his well-rested horses and mules, and moves up to his high mountain camp at the end of some road.

He is a keen judge of saddle horses, and even keener when it comes to pack mules, because—next to himself—his saddle and pack stock are his most important assets. His home camp seldom amounts to much—one or two corrals, a few saddle racks, some snow-warped hitching posts, a small "cook shack." To a newcomer, he himself may appear tough. But beneath his weathered countenance is a simple, honest soul and a personality abundant in good humor. To many of us, he is the last representative of the old West, and we hope he can hang on.

Whether or not he lasts will depend upon our future road building policy. While more and more city-confined people are learning the joys of a vacation in the wilderness, the remaining wilderness areas in California are steadily shrinking and disappearing. There are many today who think there is plenty of wild country left, enough, in fact, for their descendants to explore. But, sad to relate, this is far from true.

What about this wilderness problem? Should we save some wild country, or should it all be opened up to modern civilization? This debate is becoming an important one. Autoists say, "We want more roads." Wilderness enthusiasts reply, "If you must see our wilderness, leave your car and pack in for it. Riding through the mountains at forty-five miles an hour is no way to enjoy the out-of-doors. The very fact you are a motorist is evidence that you are content with civilized surroundings. There are already more than enough roads for you to travel. Stick to them, and leave the small area of remaining wilderness to those of us who love it and depend upon it for our recreation."

In discussing wilderness preservation, the first stumbling block is to agree upon a definition. To a few old-timers, the advent of the pack train spoiled our wilderness. To many modern motorists, a wilder-

ness is any place that cannot be reached in a car. To my mind, a wilderness area may be defined as a region sufficiently removed from auto roads so that people can, and do, pack in at least one day's journey and spend one or more nights camping out in the back country. Such an area, therefore, must possess two essential characteristics: Remoteness from roads sufficient to require the average camper to stay at least overnight in a back country camp, and sufficient attractiveness, either of scenery, fishing, hunting, or other features, to induce people to seek an outing in this wilderness region.

According to this definition, there are thirty-three remaining wilderness areas in California, totalling some 4,800,000 acres in extent. Of these, most are small in size. For example, a twelve-year old Boy Scout takes a fourteen mile hike for his first class test. And yet today in California there are only seven different wilderness areas whose size is the equivalent of a fourteen-mile square or better. Of these, there are only two of any size that are more than ten miles from the end of some existing auto road. All the rest have been taken over by the autoist.

Apart from sentimental values existing in the wilderness, there are a surprising number of economic activities dependent upon our wilderness areas. These may be summarized as follows: (1) Wholly dependent upon wilderness areas, 160 packers, with an investment of \$900,000; (2) largely dependent upon wilderness areas, (a) 770 resorts, with an investment of over \$30,000,000; (b) 169 camps, with an investment of over \$1,690,000; (c) a large number of private recreational holdings, including over 2,000 head of private saddle and pack stock; total value unknown, and (d) over a quarter of our total fish and game resources, in pursuit of which our sportsmen spend over \$100,000,000 each year; (3) partially dependent upon wilderness areas, supplies of fur-bearing animals, timber reserves and watersheds.

That the demand for wilderness area recreation has been growing, there is no doubt. Last year some 136,000 people traveled into California wilderness areas, and more are going each year—people who have learned the richness of the pleasures to be derived from a real wilderness vacation. Where packers have not been forced out of business by roads, they are doing well. But, with few exceptions, all face the road menace, and fear the day when California's beautiful mountains will be completely laid open to our mechanical civilization.

The most destructive influences from the wilderness point of view are the Civilian Conservation Corps; local "booster" groups; the auto tourist campers, and the lack of statewide planning. The tremendous amount of road-building by CCC camps during the past three years has destroyed many a wilderness. Before 1933, the Forest Service in California had constructed one and one-half miles of trail to every mile of road. Since that time, the CCC ratio has been only one-fourth mile of trail to every mile of road. Such road-building zeal is regarded gloomily by conservationists.

Most new roads are started by local politicians and chambers of commerce. Aiming for an increase in auto tourist trade, they urge a new road in their region. Built in many cases at considerable expense, it is extremely doubtful that the new roads represent a net gain to the state. The auto camper's desire to see new regions is translated into road-building action. The autoist then has a new road on which to watch the scenery whiz by, while the area is spoiled forever as a wilderness.

Lack of a state plan has contributed to the destruction. We have at present the incongruous picture of a demand for and construction of new roads without sufficient funds available adequately to maintain the existing ones.

The world-famous High Sierra is far the largest and finest wilderness remaining in California today. It is over 2,300,000 acres in extent, almost half of the total remaining wilderness area in the state. There is still a great stretch of territory between Yosemite and Sequoia National Parks that is unspoiled by roads. One can travel over two hundred miles through the "high country" entirely by trail, but this last stand of the primitive is threatened upon all sides.

The state is at this moment engaged in blasting a road into the Kings River Canyon, in the heart of this High Sierra area. More serious, because it will cross the range and bisect the wilderness, is the proposed road from Porterville to Lone Pine. Such a road will open up the Kern River region, justly renowned for its unspoiled wild beauty. And there are others, too numerous to mention, that will whittle away at our last frontier. The United States Forest Service and the National Park Service have set aside several large areas to be kept in a "primitive" state but friends of the wilderness have no definite assurance that roads will not eventually penetrate all.

To this condemnation of excessive road-building, many will doubtless reply, "What of it? This is a new era. Automobilists are far in the majority. Why save the wilderness for the few?" This frequently-expressed query has, it seems to me, some very good answers:

The value of recreational travel into our wilderness areas is popularly underestimated. Practically all of the 136,000 persons who traveled into our wilderness areas last year were sportsmen. This means that a good fourth of our hunters and fishermen seek their sport in wilderness areas. The annual expenditures by sportsmen in this State are estimated by the State Chamber of Commerce to be over \$100,000,000. As

fish and game diminish, sportsmen are turning more and more to fewer and fewer wilderness areas.

The auto tourist already has enough roads. There are over 100,000 miles of roads in California. If the average man never took anything but auto trips on his annual two-weeks' vacation, it would still take him 100 years to travel the roads of California once. To

travel National Forest and National Park roads alone would take him twenty-eight years.

Many present roads do not pay for themselves. It is only too well known by our highway engineers that most mountain "recreational" roads do not pay for their maintenance charges. To pay for the upkeep of a modern road, it requires the travel over it of 400 cars a day every day of the year. And yet one of our latest wilderness - spoiling State roads, which cost over \$1,500,000, is experi-

encing a travel of less than 100 cars a day. Our highway engineers repeatedly point out that all of our available highway funds are necessary for maintenance and improvement of existing roads; yet selfish and short-sighted groups are continually agitating for more new roads.

Fish and game hogs do not operate in wilderness areas. In the back country, where the hunter has to pack his buck onto a none-too-willing mule, instead of dumping it into a rumble seat, and where the fisherman must eat his fish instead of carting home several limits for his family and friends, there are not many poor sportsmen. The type of man who is a game hog seldom strays from the comforts of an automobile civilization. He prefers a short walk from his car, and an armchair rather than a campfire recital of his prowess.

A growing minority must be recognized. Sportsmen and others are becoming aroused over the rapid disappearance of our wilderness. They realize that, with its disappearance, will go one of our most priceless heritages. As a valiant stand against the road menace, packers last summer formed The High Sierra Packers' Association. Their voice as yet has been small, but it will grow in volume. Last summer, fifteen members of the Association displayed placards in their mountain camps. Interested wilderness travelers read the following inscription:

HELP SAVE THE BACK COUNTRY

Sign the petition below, and help us in our effort to prevent the encroachment of roads upon our remaining High Sierra wilderness area.

Under this placard were tacked petition sheets:



Photograph by Wallace Hutchinson

The demand for wilderness recreation is growing—and will continue to grow

PETITION

We, the undersigned, wish to record here our protest against the encroachment of roads upon the remaining High Sierra wilderness area. We feel there are already enough roads for the auto tourist. The remaining country should be left in its natural wild state, and we intend to unite in our efforts to keep it so.

These petition sheets, tacked in haphazard fashion on corral fences, cook shacks, or saddle racks, were signed by nearly four thousand wilderness travelers. This is a small number, but it indicates the attitude of a great many more.

Whether or not the packer survives will depend upon the progress of wilderness conservation. There is a large and growing body of citizens that are opposed to road-building. But they are not as well organized as the destructive groups. What happens when the latter succeed is only too aptly described in the following letter from a packer friend:

"Dear Sir: I will tell you about the packing biznes an you can ficks the blank to sute your self as I can explain it bitter. Now I am one of the oldest packers around this countrey I have been packing from - - - meadows for over 20 years and when I first started to packing aney one that was a hunter atoll and a fishermen could get the limet and now they have roads all around me and now there is 30 men to 1 buck that is kill and same way with fishing. I had 30 head of stock an had 2 an 3 men helping me an was bisey all the time and since hard times and new roads have been bilt the packing has been going down to nothing

last sumer I only packed 2 parties out 74 dollare was all I took in all summer I had to work for cattle men to get buy. I eather half to quit or move and the pack an hunting will never be like it ust be and when they bild roads in to a new countrey it is no more a wild countrey the fish an game start to going down rite a way. I had 5000 dollare of equipment 10 years a goe now it aint worth mutch. There is more people coming to the mountains than ever was but the most of them stay a long the roads an hunt an where the new roads are the fish an game dont have aney chance."

The author does not contend that all new roads are destructive. Many miles of new construction are doubtless warranted, particularly in heavily timbered areas. But what is deplored is the construction of purely recreational roads to be used by motorists who already have more than enough roads to travel.

Readers may interpret this article as an appeal to save the back country packers. It is, if saving the packer means saving the wilderness against roads running wild. Some California packers are better situated than others. Much of the high mountain wilderness will remain unspoiled for a long while. But the pressure for new roads is unabating. Increased wilderness travel and a militant stand by conservationists will be needed to save our back country from ultimate disappearance. The establishment of Forest Service Primitive Areas has been a great source of encouragement to wilderness enthusiasts. A great deal of good work has been done by an aggressive minority. But the road menace is ever present, and the wilderness ever on the defensive.



The tremendous amount of road building by the Civilian Conservation Corps during the past four years has destroyed many a wilderness area, the author contends

Photograph by Gabriel Moulin

A HERETIC OPENS THE TROUT SEASON: By HARRY BOTSFORD



OR the opening day of the trout season I am a heretic.

Otherwise, throughout the entire season, I am simply an orthodox fly fisherman who looks with deep and abiding scorn on those anglers who revert to the use of live bait. I am a purist; at least I so rate myself for the balance of the trout season. I tie my own flies and use cunning and strange devices to secure woodcock feathers and hackles

from wood duck feathers. My dry flies are a delight to the eye; dainty, perfect as to coloration and they ride the clear waters jauntily and enticingly. My leaders are made of the finest Spanish gut and tapered to a delicate and fragile infinity. My fly rods are never greater than four and one-half ounces in weight and my reels must balance the rod perfectly when wound with a double-tapered line.

Yet, on the opening day of the trout season I am a heretic. On that day I turn to the lowly worm. On that day I revel in the sort of fishing I did when I was a youngster. And I like it, too! And I am entirely unashamed of this temporary fall from grace. Further, I put myself on record as claiming that it is a wholly sound method of angling—for one day.

From my office window I can watch the traffic roll down Broad Street. The sound of horns and the roar of motors splashes into this room. But it fails to penetrate a mind that is set on April fifteenth and the adventures in store for that memorable day.

I know what the weather will probably be like: it will be cold, blustery and a spit of snow in the air will make a heavy sweater a necessity. It will be dark when the alarm clock shrills its imperative message and I dress quickly, slip downstairs and gather up the tools and equipment I will need and which have been carefully prepared. The motor of my car will spit and cough and sing into sudden activity. I swing down street to a restaurant I know where they serve most delectable pancakes and bacon. I eat hurriedly and dash to my car. A gray dawn lightens the road as I tool the car swiftly over hills and around turns.

Then, abruptly, I swing down a rutted, rough and twisting dirt road. A mile's jolting brings me to Killwell Creek. The water, I note, is clear and high. The car is parked and with numbed fingers I set up my rod. Then, with some difficulty I thread the line through the guides. I am thankful I did not plan on using a fly

line for the thickness of it would quickly be covered with a sheath of ice and it would stick to the tip guide. I tie on a seven-foot length of gut leader. Then comes a tiny gold spinner and a tiny hook. I blow on my hands, dig into a bait box and drag out a reluctant and indignant worm which I quickly thread on the hook. Wiping my hands, I fill and light my pipe, shoulder my creel and light pack and am ready to start. It's daylight now and over the hill comes the throbbing roar of another fisherman's car.

I turn to my left and the frozen grass crunches under my booted feet. I strike the stream a half-mile away. Here Killwell Creek narrows and deepens and just as the current swings abruptly an ancient log juts into the flow, making an attractive eddy. I know that place! There's an old brown trout who trades up and down that stretch of water, and a most wily trout he is, too. Twice I have raised him on a Coachman, just at dusk. Once I snagged him neatly but he nonchalantly broke my leader. Time and again I have tried to interest him in other lures but without success.

This is downstream fishing when you use live bait. Trout lie with their heads upstream, watching for food to drift down to them. Hence, it behooves the bait fisherman to keep out of sight. I stand well back from the whispering waters, strip my line with chilled fingers, drop my chilled worm into the swirling waters and let it sweep down past that old log. Then, with sudden jerks and twists I start to retrieve.

I watch carefully and can see the glow of the tiny gold spinner flashing in the waters. There's a flash behind that spinner, a tiny, encouraging tub. I retrieve further but no other signal. Then once more I let the bait swirl down and again I start to retrieve. Suddenly my rod arches and I strike. I am on! My fingers are numb and I handle the line and rod badly. The trout leaps and I see it is not the big fellow I had hoped to get, but still a fine trout. Once I nearly lose him as he heads into the current and dashes down stream. But at last he is beaten and comes stubbornly to net. A beauty! A brook trout he proves to be, lovely in color and fat as butter. He will weigh close to a pound. I kill him mercifully and put him in the creel.

Then I rebait and start down stream. The clouds break and thin golden sunshine bathes the barren trees and brings a little warmth. In another deep pool I snag one weighty fish and lose it all in one breath. Then I contact a small brown trout just over legal size that fights in a perfect frenzy. I carefully wet my hands and release him. Like a flash he is gone. Then I catch in rapid succession a round dozen of his brothers and sisters, all of which I release.

Around a bend the creek bed flattened and wandered through a nest of grey moss-covered boulders. Here I found some real fishing. The tiny gold spinner did

great work, beating the waters around those rocks. In an hour I had netted three twelve-inch brown trout and every one of them gave me a real battle in the fast water. Yes, I lost three others who proved to be too smart and agile for me to handle.

Just before noon I met an angler. He was an old man and a supremely happy one. His boots were patched and his creel of ancient but honorable ancestry. His rod, I noted, was one of the best that ever came from Britain where the making of fine fly rods is a high and holy art. He was a gaunt figure, standing hip-deep in the tugging waters. His hair was white beneath the battered old felt hat, his smooth cheeks touched with color. He, too, was a bait fisherman and one of the best I have ever seen in action. Using a small minnow for bait his every action was sheer poetry. He would manipulate his rod in such a manner as to drop that minnow lightly a distance of fifty feet. Then he would bring it in, swirling it in a most tempting manner.

I watched him work. Suddenly there came a shadowy flash from the opposite bank, ghostly but tangible. There was a grunt of satisfaction from the old fellow as his rod arched alarmingly. I had a box seat for the battle. It was an epic affair and lasted for twenty thrilling minutes. At no time was I sure who would win! Then, beaten but defiant, the old warrior of the waters came to the surface on his side and the great net closed in on him. The triumphant angler splashed to the shore, his ancient face split in a great grin of victory. It was a gorgeous brown trout, freckled with lively color, weighing at least three pounds, one of the finest I have ever seen. The old angler looked at him carefully and appraisingly. "A fine fellow, isn't he?" he asked. I nodded. Then, to my utter astonishment, he wet his hands, removed the hook, lowered the net and released the prize. The trout lay for a second, stunned with his good fortune and then darted away to shelter. The angler chuckled at the look of amazed indignation on my face.

He flipped open the cover of his creel. I looked, open-eyed, and saw four trout as large if not larger than the one he had released. "I have enough trout for my table," he smiled. "From now on I release what I am lucky enough to catch."

Sound sportsman! He was, I discovered, a Judge from Pittsburgh and thoroughly familiar with Killwell, McLaughlin, Potter Brook and our other trout streams.



H. Armstrong Roberts

A dry fly purist throughout the season except on the opening day, when the author turns heretic and resorts to the lowly worm

Like me, he was a heretic on the opening day of the season. It was a pleasant and restful interlude and we parted with regret.

I had no envy of his fine creel; but I was inspired with a hope that I might equal it. Within the next half-mile of stream, however, I found nothing but bad luck and indifferent trout. Then my luck changed and I tied into a crafty old fellow that kept me busy for over fifteen minutes. He was stubborn and lively and crafty beyond reason. When I netted him I, too, was tired. Easily he would weigh two pounds.

Suddenly I realized that I was not only tired but hungry, so I found a spring of clear, cold water, opened my pack and prepared my (Continuing on page 189)

PRESIDENT MOVES TO SOLVE FOREST PROBLEMS



PRESIDENT FRANKLIN D. ROOSEVELT

DECLARING that the abuse of commercial forest lands by private owners threatens the general welfare of the country, President Roosevelt on March 14th sent to Congress a special message dealing with the forest situation and recommending that Congress initiate at once a study by a joint committee to formulate remedial legislation for consideration at the next session of Congress. The President emphasized in particular the situation with respect to private forest land and the possible need for public regulatory controls that will protect private as well as public interests inherent in growing forests.

The forest problem is essentially one of land use, the President told Congress, and part of the broad problem of modern agriculture common to every part of the country. Pointing out that almost five hundred million acres of the forest lands in the country are commercial in character, and that the bulk of these lands are in private ownership and still subject to abuse, he declared that "some way must be found to make forest lands and forest resources contribute their share to the social and economic structures of the country and to the security and stability of all our people."

While progress has been made, the President said, it is inadequate to meet the situation. "We are still exploiting our forest lands," he continued. "Forest communities are still being crippled; still being left desolate and forlorn. Watersheds are still being denuded. Fertile valleys and industrial cities below such watersheds still suffer from erosion and floods. We are still liquidating our forest capital; still cutting our accessible forests

In Special Message, President Recommends Congressional Committee to Study Need for Public Regulation of Forest Lands and Other Measures

faster than they are being replaced. Our forest budget still needs balancing."

Concluding his message, the President recommends that Congress appoint a joint committee of both Houses to study the situation in respect to private forest lands, and such additional matters as:

1. The adequacy and effectiveness of present activities in protecting public and private forest lands from fire, insects, and diseases and of cooperative efforts between the Federal Government and the States.

2. Other measures, Federal and State, which may be necessary and advisable to insure that timber cropping on privately owned forest lands may be conducted as continuous operations, with the productivity of the lands built up against future requirements.

3. The need for extension of Federal, State, and community ownership of forest lands, and of planned public management of them.

4. The need for such public regulatory controls as will adequately protect private as well as the broad public interests in all forest lands.

5. Methods and possibilities of employment in forestry work on private and public forest lands, and possibilities of liquidating such public expenditures as are or may be involved.

The President expressed the hope that this study by Congress "will form the basis for essential legislation during the next session of Congress." His message in full follows:

"To the Congress of the United States:

"I feel impelled at this time to call to the attention of the Congress some aspects of our forest problem, and the need for a policy and plan of action with respect to it.

"Forests are intimately tied into our whole social and economic life. They grow on more than one-third the land area of the continental United States. Wages from forest industries support five to six million people each year. Forests give us building materials and thousands of other things in everyday use. Forest lands furnish food and shelter for much of our remaining game, and healthful recreation for millions of our people. Forests help prevent erosion and floods. They conserve water and regulate its use for navigation, for power, for domestic use, and for irrigation. Woodlands occupy more acreage than any other crop on American farms, and help support two and one-half million farm families.

"Our forest problem is essentially one of land use. It is a part of the broad problem of modern agriculture that is common to every part of the country. Forest lands total some six hundred and fifteen million acres.

"One hundred and twenty-odd million acres of these forest lands are rough and inaccessible—but they are valuable for the protection of our great watersheds. The greater proportion of these protection forests is in public ownership. Four hundred and ninety-five million acres of our forest lands can be classed as commercial. Both as to accessibility and quality the best four-fifths, or some three hundred and ninety-six million acres of these commercial forests, is in private ownership.

"This privately owned forest land at present furnishes ninety-six per cent of all our forest products. It represents ninety per cent of the productive capacity of our forest soils. There is a continuing drain upon commercial forests in saw timber sizes far beyond the annual growth. Forest operations in them have not been, and are not now, conducive to maximum regrowth. An alarming proportion of our cut-over forest lands is tax-delinquent. Through neglect, much of it is rapidly forming a new but almost worthless no man's land.

"Most of the commercial forest lands are in private ownership. Most of them are now only partially productive, and most of them are still subject to abuse. This abuse threatens the general welfare.

"I have thus presented to you the facts. They are simple facts; but they are of a character to cause alarm to the people of the United States and to you, their chosen representatives.

"The forest problem is therefore a matter of vital national concern, and some way must be found to make forest lands and forest resources contribute their full share to the social and economic structures of this country, and to the security and stability of all our people.

"When in 1933 I asked the Congress to provide for the Civilian Conservation Corps I was convinced that forest lands offered one source for worth-while work, non-competitive with industry, for large numbers of our unemployed. Events of the past five years have indicated that my earlier conviction was well founded. In rebuilding and managing those lands, and in the many uses of them and their resources, there exists a major opportunity for new employment and for increasing the national wealth.

"Creation of the National Forest system, which now extends to thirty-eight States, has been a definite step toward constructive solution of our forest problem. From national forest lands comes domestic water for more than six million people. Forage, occurring largely in combination with timber, contributes stability to one-fourth the western range livestock industry. Through correlated and coordinated public management of timber and all other resources, these public properties already help support almost a million people and furnish healthful recreation to more than thirty million each year. By means of exchanges and purchases, the Congress has for many years encouraged additions to this system. These measures should very definitely be continued as funds and facilities are available.

"The Congress has also provided that the national government shall cooperate with the various States in matters of fire protection on privately owned forest lands and farm woodlands. The States are in turn cooperating with private owners. Among other measures the Congress has also authorized an extensive program of forest research, which has been initiated and projected; Federal cooperation in building up a system of State Forests; cooperative activities with farmers to

integrate forest management with the general farm economy; the planting of trees in the Prairie-Plains States—an activity which has heretofore been carried on as an emergency unemployment relief measure with outstanding success and material benefit; and—under the Omnibus Flood Control Bill—measures to retard run-off and erosion on forested and other watersheds.

"Progress has been made—and such measures as these should be continued. They are not adequate, however, to meet the present situation. We are still exploiting our forest lands. Forest communities are still being crippled; still being left desolate and forlorn. Watersheds are still being denuded. Fertile valleys and industrial cities below such watersheds still suffer from erosion and floods. We are still liquidating our forest capital; still cutting our accessible forests faster than they are being replaced.

"Our forest budget still needs balancing. This is true in relation to future as well as present national needs. We need and will continue to need large quantities of wood for housing, for our railroads and our telephone and telegraph lines, for newsprint and other papers, for fiber containers, for furniture and the like. Wood is rich in chemicals. It is the major source of cellulose products such as rayon, movie films, cellophanes, sugars of certain kinds, surgical absorbents, drugs, lacquers, phonograph records. Turpentine, rosin, acetone, acetic acid, and alcohols are derived from wood. Our forest budget should, therefore, be balanced in relation to present and future needs for such things as these. It should also be balanced in relation to the many public services that forests render, and to the need for stabilizing dependent industries and communities locally, regionally, and nationally.

"I am informed, for example, that more than one hundred million dollars has recently gone into development of additional forest industries in the southeastern section of our country. This means still more drain from southern forests. Without forestry measures that will insure timber cropping there, existing and planned forest enterprises must inevitably suffer. The Pacific Northwest contains the greatest reserves of virgin merchantable timber in the continental United States. During recent years many private forest lands have been given better fire protection there, and there are more young trees on the ground. But the cutting drain in our virgin Douglas fir forests is about four times current growth, and unless existing practices are changed the old fir will be gone long before new growth is big enough for manufacture into lumber.

"I recommend, therefore, study by a joint committee of the Congress of the forest land problem of the United States. As a nation we now have the accumulated experience of three centuries of use and abuse as guides in determining broad principles. The public has certain responsibilities and obligations with respect to private forest lands, but so also have private owners with respect to the broad public interests in those same lands. Particular consideration might therefore be given in these studies, which I hope will form the basis for essential legislation during the next session of Congress, to the situation with respect to private forest lands, and to consideration of such matters as:

"1. The adequacy and effectiveness of present activities in protecting public and private forest lands from fire, insects, and diseases, and of cooperative efforts between the Federal Government and the States.

"2. Other measures, Federal and State, which may be necessary and advisable to insure that timber cropping on privately owned (Continuing on page 187)

CYPRESS SWAMP OF THE KIAMICHIS



Oklahoma's little-known "Buzzard Roost Cypress Swamp"

By

BARON CREAGER

In the summer of 1937, George M. Sutton, Cornell curator of birds, announced that he would enter southeastern Oklahoma to collect specimens of rare birds, and the announcement was interpreted to mean that he would seek, among others, the ivory-billed woodpecker.

There had been no record of this rare bird in Oklahoma, but its existence in the southeastern corner of the state was possible, for in Oklahoma the name Kiamichi (*Ki-a-mish-i*) is recognized as a synonym for wilderness.

So Mr. Sutton's program came in for pointed criticism in leading newspapers, whose editors were prompted by Oklahoma bird lovers rising in unison to protest. Among them was Hugh S. Davis, director of the Tulsa Zoo, widely recognized southwestern nature student and photographer and as widely recognized as a conservationist. The controversy eventually reduced itself to correspondence between Mr. Sutton and Mr. Davis, in which the former explained that he planned not to take ivory-billed woodpeckers, but that he hoped only to find them and gain for them adequate protection. So the excitement died and it subsequently developed that Mr. Sutton did not know about and did not find the unrecorded stand of cypress, nor did he find the ivory-billed woodpecker.

But the controversy directed to the region the attention of Mrs. Margaret M. Nice, who was then finishing a book, *Birds of Oklahoma*. She invaded the Kiamichi country in search of additional subject matter and was

DEEP in the Kiamichi Hill country of southeastern Oklahoma is an isolated stand of majestic cypress—remnant of a decimated forest—saved now from the lumberman's ax because a Cornell University professor wanted to find specimens of the rare ivory-billed woodpecker.

That is a slightly complicated introduction to the story of a work of conservation that was almost too late. But the complications were responsible not only for the conservation, but for the discovery that here was an example of wilderness that must be preserved—a few acres of the primitive just about as nature put it there, and lost forever if lost at all.

To understand the position of Oklahoma conservationists when they became aware that a cypress swamp of unusual interest had been "discovered" in the state; and to understand the part played by the Cornell professor, the complications must be separated from the actual background of Oklahoma's cypress swamp.

told by the proprietor of a roadside tourist camp of a swampy area abounding in "large white cranes." Guided to the area, she discovered with delight that the "large white cranes" were nesting American egrets and that the attraction for them was the stand of cypress trees, some of them 120 feet tall. But she was alarmed by the abundance of fresh cypress stumps and the evidence of protracted logging activity.

She immediately communicated her find to Mr. Davis, who made three trips into the swamp in the summer of 1937, for the region can only be entered during the dry season. He found the swamp to contain not only a rare stand of timber, but that it was a sanctuary for many rare species of birds, not previously believed to be native to Oklahoma. In his three expeditions he made an exhaustive survey of the swamp region, recorded the bird life found there and, what is of equal importance, brought out a wealth of photographic evidence.

Called by the natives "Buzzard Roost Cypress Swamp," the region is in McCurtain County, in bottom-land between Mountain Fork and Little Rivers, seventeen miles southeast of Broken Bow.

The swamp covers about 160 acres of land, but the stand of cypress is restricted to not more than fifteen acres, although there is a suggestion that cypress once covered much more territory. Only a few miles distant from the main stand is a single cypress over 100 feet in height, long recognized as Oklahoma's tallest tree. Strange that the cypress swamp remained so long "undiscovered"!

Mr. Davis estimates that 150 cypress trees remain. Their topmost branches do serve as roosts for buzzards, but they also serve to couch the nests of egrets and water



Silhouetted in beauty—the American Egret, high up in the cypress branches

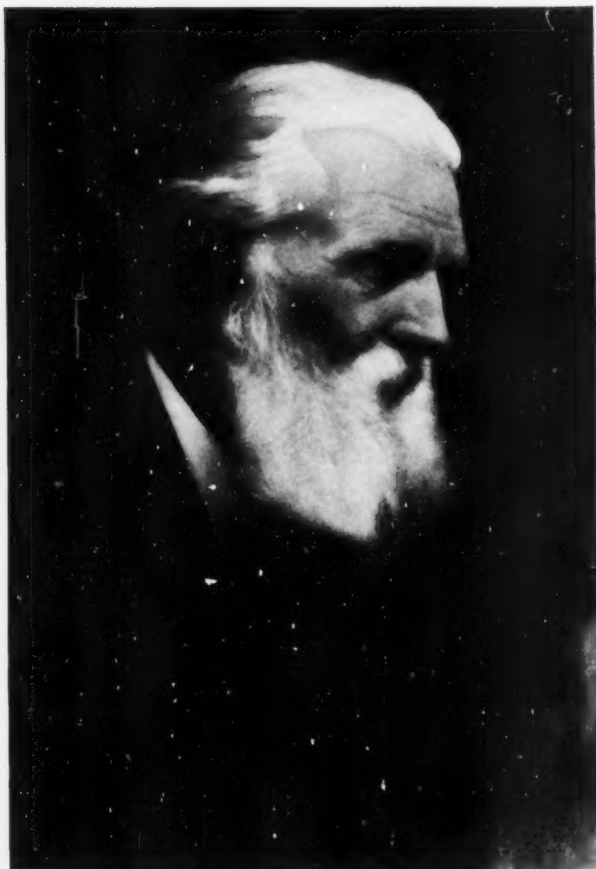


The Water Turkey or Snake Bird—with a wing spread of nearly three feet, this is the rarest nesting bird in the swamp

turkeys, or snake birds, previously believed to be only transients in Oklahoma. The great blue heron squawks and gargles throughout the swamp. In fact, says Mr. Davis, the sanctuary is marked from a distance of half a mile by the cacophony that arises.

There, too, were the green heron and yellow crowned night heron, the red-shouldered hawk and the lark sparrow and the immediate vicinity was abundantly supplied with woodcock, scarce in Oklahoma. Then, although no ivory-billed woodpeckers were found, the pileated woodpecker, also supposed to be rare in Oklahoma, was numerous. It was obvious that to preserve the remaining cypress would be to perpetuate this primitive sanctuary for rare birds. But to preserve the cypress was something else.

The land is owned by the Choctaw Indians. County records show, however, that timber rights on this particular piece of land were sold fifty years ago by the forebears of the present generation of Choctaws and the law as it applies to Indian land is this: Timber rights once sold are sold forever. The Indian owner may not himself remove a piece of timber without permission of the owner of the timber rights. Federal and state governments, in this case at least, are powerless to intervene. The cypress is the prop- (Continuing on page 187)



John Muir — photographed from the painting by Herbert A. Collins, Sr., which is part of the permanent exhibit at the museum in the John Muir National Monument in California

The Centennial of

JOHN MUIR

MAN OF THE MOUNTAINS

By **CHARLES EDGAR RANDALL**

Photographs by courtesy of the
National Park Service

LONG before daylight on a cold winter morning a home-made wooden clock tripped a trigger, setting in motion an ingenious mechanism which dumped a sleepy little Scotch boy out of his bed. The candle lit and the fire kindled, the boy turned to the precious books denied him during daylight and evening hours by the demands of farm work and a stern father.

The bed had been pivoted on a crossbar and hitched to the clock by a special rig so that it would tip up at a prescribed hour and deposit the sleeper on the floor. It was young Johnny Muir's "early rising machine," a violent but effective alarm clock of his own invention, and it was to have an important part in shaping the future of the red-haired boy who became one of America's great conservationists.

This red-haired boy, who stole from his hours of sleep to read what few books he could get his hands on, was later to write other books which would materially influence the course of the Nation's public policy toward its natural resources. He was to sound a call for the preservation of natural wealth and beauty that would be heard throughout the land. A president of the United States was to journey across the continent to seek his advice on forest conservation.

This year marks the one-hundredth anniversary of John Muir's birth. The United States Forest Service and the National Park Service, both of which owe much to him, are giving official observance to the

centenary. America's great conservationist was a native of Scotland. The town of Dunbar, on the North Sea coast, was where John Muir entered the world, on April 21, 1838. One of a family of eight, his early years were not easy ones. His slight frame knew the feel of the cane; daily floggings were part of the routine by which Latin and arithmetic were drilled into schoolboy heads. A strict Calvinist, his father made him memorize long passages from the Bible, and sound thrashings were the penalty for the slightest slip in recitation.

But the boy's imaginative mind could carry him far away from this daily round of schoolbooks and floggings. From the battlements of old Dunbar Castle he could watch the ships go out to the sea, and his fancy would take him voyaging on those ships to all the strange places of the world.

One day, when he was eleven, he found himself on one of those ships, bound for America. His father had decided to emigrate to the new world, where land was plentiful; and Johnny, his older brother, and sister Sarah, were taken along.

Wisconsin, where they settled, was in 1849 still a frontier wilderness. The older Muir and the three youngsters reached the site of their new home with a six-ox-team and wagon piled high with supplies and farm implements. There in the hardwood forest a few miles from Portage, a log house had to be built and land cleared for crops. The mother and the other children came a few months later.

Eleven-year-old John Muir was put to a man's work. Falling trees, grubbing stumps, clearing out brush, sowing the fields by hand, and harvesting the grain with a scythe—at such hard tasks of a pioneer farm the boy labored through his 'teen years. There was no more school. Work was from dawn to dark, and a severe father allowed him little time to his own devices. But his alert mind did not slow to the pace of his ax or hoe; he was keenly aware of what was around him and as he worked he got to know intimately the trees and plants

of the forest and the birds and animals they sheltered. Ever growing was his interest in all the things of nature.

He had a consuming desire for knowledge. By various means he acquired a few books, and they became his most treasured possessions. His father would not permit him, however, to read after supper. If young Johnny wanted to "waste time" with those books, he could get up earlier in the morning—and he did.

It was not an easy life for a growing boy. John Muir later felt that such hard labor and curtailed sleep in his boyhood years checked his proper growth, and he was probably right. He grew only to medium height, and was slight of frame. But he developed great physical endurance.

As a wee bairn in Scotland and as a farm boy in Wisconsin John Muir had always longed to see the wonders of the wide world and explore its far-off places. And now that he was twenty-one and of age, he felt that he was free to start out on his own. When the crops were in that fall of 1860, he bundled together a few of his books and belongings, and some of the mechanical contrivances he had devised, and set off down the road. His father thought he was headed straight for perdition. Actually he headed for Madison and turned up at the Wisconsin State Fair.

Of an inventive turn of mind, Muir had in his early morning hours rigged up several ingenious contraptions—a homemade thermometer, a barometer, a "self-starting sawmill," an automatic horse feeder. At the State Fair he exhibited some of these, including his early rising machine, which he set up and hired two boys to help demonstrate. His inventions and his entertaining way of explaining them won him considerable attention, and the early rising machine was the hit of the show. Among those whose attention he attracted was Dr. Ezra S. Carr, Professor of Natural Sciences in the Univer-



The stately redwoods, so loved of the poet, immortalize his name in the John Muir National Monument

sity of Wisconsin. One of Muir's young helpers in demonstrating the early rising machine was Dr. Carr's son. Dr. and Mrs. Carr became Muir's lifelong friends. With their encouragement he entered the University.

Muir would conform to no prescribed curriculum, and at the end of four years he left the University of Wisconsin without a degree. But he pursued avidly the courses of his choosing, in literature, chemistry, geology, and botany. Between classes he explored the woods and countryside, studying nature at first hand. He managed to live on a few cents a day.

Sometime later, John Muir found employment in an Indiana machine shop. With his mechanical ability and inventiveness he was a decided asset to the business, and he was promised a partnership. But one day a bit of steel pierced his eye. He was laid up for weeks.

threatened with blindness. When he recovered, he resolved to "bid adieu to mechanical inventions" and devote the rest of his life "to the study of the inventions of God."

From Indiana John Muir set out on a foot trip to the Gulf of Mexico. He kept a detailed journal of his experiences, and his observations of the flora, forests, and physiography. It was the raw material of his book, "A Thousand Mile Walk to the Gulf," published several years later. Throughout his later travels and explorations, John Muir always kept a journal, human and intensely personal, illustrated with abundant pencil sketches. Seventy or more notebooks were filled.

In Florida, Muir was stricken with malaria. A kindly family took him in and cared for him until he was on his feet again. A brief visit to Cuba followed, and from there he made his way to New York.

In 1868, John Muir arrived in California, having made the long voyage 'round the Horn as a steerage passenger. From San Francisco he set out immediately on foot for the Sierra. From that time on, the rugged, forest-covered mountains of California were Muir's home. Though in later years he traveled over much of the globe, though he ranched for ten years in the lowlands and made a comfortable fortune, he returned again and again to the snow-capped Sierra, and their mighty trees and granite crags became his absorbing passion.

For six years, Muir made his headquarters in the Yosemite Valley, studying its geologic history, its flora and fauna, and steeping his soul in its scenic wonders. He tramped over much of the Sierra range, camping where night found him, subsisting mainly on raw oatmeal and tea, with native nuts and berries. By the light of the campfire, he wrote frequent, long letters to the Carrs, now at the University of California. Crammed with pungent thoughts and keen observations were these letters; at Dr. Carr's instigation some of them were published, and soon John Muir was writing directly for leading periodicals, "to show forth the beauty, grandeur, and all-embracing usefulness of our wild mountain forest reservations and parks, with a view to inciting the people to come and enjoy them, and get them into their hearts, that so at length their preservation and right use might be made sure."

And people came; his articles attracted national attention. Ralph Waldo Emerson, the philosopher, Le-

Conte, Agassiz, Sir Joseph Hooker, Asa Gray, the great scientists, were among those who sought out the man of the mountains in his remote forest retreat. Robert Underwood Johnson, one of the editors of *Century Magazine*, became his close friend, and together they planned a campaign for the establishment of what is now Yosemite National Park. Muir's series of articles in *Century* raised a country-wide clamor for action, and in October, 1890, the Yosemite National Park bill was enacted by Congress. In the following year Congress passed an act empowering the President to create forest reserves in the Public Domain.

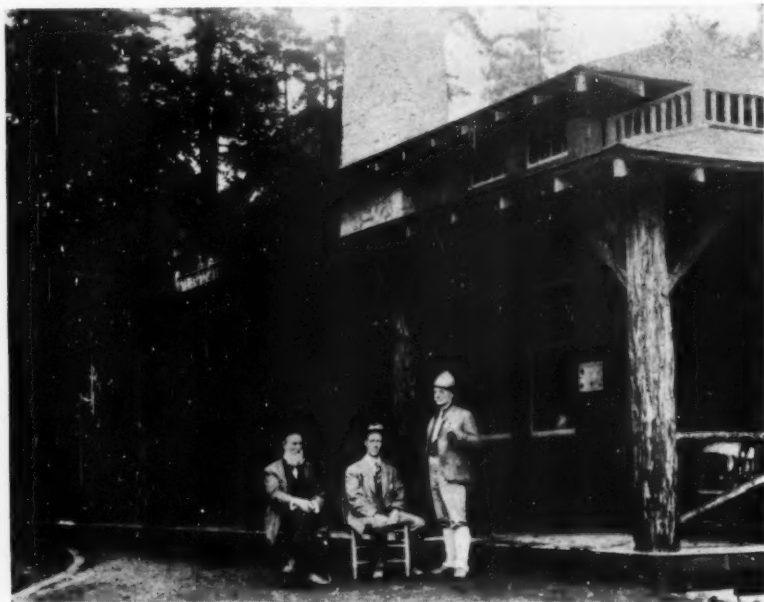
As early as 1876, Muir was proposing the appointment of a national commission to inquire into the fearful waste of forests, to make a survey of the existing lands in public ownership and to recommend measures for their conservation. Not until 1896 was such a commission appointed. On the basis of its report, President

Cleveland established thirteen forest reserves, comprising more than twenty-one million acres; President McKinley set aside an additional seven million acres.

Meanwhile, following his first six years in the Sierra, Muir had made long trips into the wilderness country of Nevada, Utah, and the Pacific Northwest, and a trip of exploration in Alaska, where he discovered and described

a number of glaciers, including the one which bears his name. As a naturalist, Muir was interested in all nature's manifestations, but the trees of the forest were his first concern. Sequoias and pines were his favorites. He made special journeys to Australia, to Africa and South America to see and study their most impressive forest trees. On some of these trips he was accompanied by Charles S. Sargent, the director of the Arnold Arboretum, who dedicated a volume of his monumental *Silva* to him.

In 1880 John Muir married. Louie Wanda Strentzel was the daughter of a Polish expatriate who became one of California's noted horticulturists. Muir had met her through the Carrs. Their marriage was an almost ideally happy one; Louie Strentzel Muir became her husbands' sympathetic and self-effacing companion in his studies of nature and in his efforts for forest conservation. She made him a bright and cheerful home; she was his trusted literary advisor; and during his frequent travels and sojourns in the mountains, she managed capably the big (Continuing on page 190)



A picture made about 1913 of the old Muir Woods Inn. It shows the poet, with William Kent—who was the donor of the Muir Woods National Monument, and Gifford Pinchot—standing. The inn has since been destroyed by fire

EDITORIAL



ROADS AND THE WILDERNESS

ONE of the finest developments in the field of conservation during recent years has been the movement to preserve some of the few remaining wilderness regions of the country. Started hardly more than ten years ago, the movement has grown rapidly and has awakened the public to the swiftness with which American landscapes are being denatured by modern trends.

An interesting and significant aspect of the movement is the extent to which it is bringing to the surface and making expressive public sentiment against America's prolonged mania for building roads to every last acre of America's nature. Nowhere is this better illustrated than in California where, as Mr. Norman B. Livermore points out in his article "Roads Running Wild" on page 153 of this issue, great numbers of citizens have become aroused over highway invasion of the State's superb wilderness scenery embraced largely in twenty National Forests and four National Parks.

Today there remain in these parks and forests only six million acres of mountain wildness that have not been invaded by roads. Of these six million acres, only six hundred thousand acres are more than ten miles from an existing road. Thus has the impact of road building destroyed the wilderness environment of the Forty-niners.

Two years ago the Commonwealth Club of California, one of the largest public forum organizations of the country, interested itself in the extent to which the building of roads was destroying the State's mountain primitiveness. In July, 1935, the Board of Governors requested the Club's Section on Forestry and Wildlife to report on the question: "Should we stop building new roads into California's Sierra region?"

The Section held many public hearings and forums which brought out an impressive sentiment and many interesting findings. Among the latter was that there is more mileage of roads per square mile of road area in the mountain regions of California than is found in the State as a whole. A review of the Section's report indicates the interests supporting a continuance of road building were represented mainly by the chambers of commerce and automobile associations. Opposing the extension of roads were citizens in all walks of life.

Upon conclusion of this public forum, the Section reported to the Club that based on the studies and representations made:

"During the last three seasons an average of twenty million people annually have traveled into or across these mountain highways that serve the National Forests and National Parks. Notwithstanding this enormous travel, a number of the main routes do not have enough travel to earn their maintenance. In the opinion of the Division

of State Highways, it requires an average traffic of four hundred vehicles a day to earn enough to pay for the maintenance of the average highway. Since most of the mountain highways have seasonal use only, few of them have enough traffic to pay for their maintenance alone. This means that in order to build new recreation roads we must draw on the revenue produced on our main roads.

"As matters now stand every area in California susceptible to agricultural development, every major development of natural resources, and a vast majority of the recreational areas, are connected with and served by roads. What is needed is not new roads but the adequate improvement of those that we already have. There is as much need for the abandonment of some existing roads as there is for construction of new ones. * * *

"The back country is one element in the land use problem. The penetration of rough mountain regions with modern forms of construction is merely a phase of the widespread expression of an abundance of social energy. * * *

"The ultimate pattern of the California mountains, unless the present trend is checked, will be made up of roads, excessive development, poor hunting and fishing and a large body of exploiters. * * *

"Just a few more years of hesitation and the only trace of that wilderness which has exerted such a fundamental influence in moulding American character will be in the musty pages of pioneer books and the mumbled memories of tottering antiquarians. * * *

"We believe that California's undeveloped high mountain areas have been reduced dangerously to a minimum for the welfare of the State, and that no further intrusions by the building of roads should be allowed without convincing proof of public necessity."

When the Section's report was submitted to the Club membership of four thousand for action, it was adopted by a ten to one vote. It would be interesting to know if this poll of public opinion reflects sentiment in other sections of the country. What has happened in California in the way of road building programs has happened in other states, with the result that the last remnants of America's unmarred wilderness have been disappearing rapidly before the mechanized advances of the modern road builder.

It would be timely and helpful if public organizations in other states would arrange similar polls and give politicians, commercial interests and local chambers of commerce, who use roads as magnets for drawing funds out of state and federal treasuries, a clear test of public opinion.

HISTORIC LUMBER TOWNS

3. Muskegon, Michigan

By STEWART H. HOLBROOK

When logging engines were young

© William M. Harner

The forty-eight big sawmills that whined day and night around the shores of Lake Muskegon didn't make quite so many boards as those along the Saginaw River, yet in many respects the City of Muskegon, Michigan, was more notable than any previous or contemporary lumber town.

For one thing, Muskegon cut more lumber than either Bay City or Saginaw, which meant a heap more lumber than Bangor ever made. Its sawdust history began in 1838 when Ben Wheelock, agent for the Muskegon Steam Mill Company, started cutting boards. The first cargo of lumber went out of Muskegon Lake, which is a bay of Lake Michigan, in February of 1839. The vessel soon ran into drift ice, and it was ten days before she got to Chicago. It was the first shipment of billions of feet that were to go from Muskegon to the rising metropolis at the south end of the big lake. In years to come it was said that Muskegon lumber built both Chicagos—the one before the Great Fire, and the one after.

Muskegon prospered from the start. Close by was the mouth of the Muskegon River and down that stream came great white pine logs cut in a forest that seemed to have no end this side of Canada, or at least, not this side of the Straights of Mackinac. Muskegon Lake was an ideal booming ground, in which to sort and handle the logs from a hundred logging camps up-river. Down the big lake a bit was Chicago, a handsome market for lumber if ever there was one.

By the 1860 period, no less than twenty-five large mills were busy at Muskegon and

their annual cut had risen to 160,000,000 feet. And by this time, too, Muskegon and other Michigan men had invented machinery that made Maine logging and saw-milling look like child's play.

His name is lost to history, but some man devised a set of two wheels, five feet from hub to rim and therefore ten feet tall. With these, logging could go on all summer, for the high axles cleared stumps, rocks and other ground-obstructions.

Heretofore, logging had been a winter business. Now, with camps running the year round, something had to be done to speed up the sawmills. Alexander Rodgers, of Muskegon, invented and patented the spike roller edger and the friction nigger, two rigs that will not mean much to the layman but which greatly speeded up the process of reducing logs to boards. Some other genius invented the bull-chain, by which logs could be pulled into the sawmill in an endless procession. Then, a little later, a man named Hill, of nearby Kalamazoo, devised an improvement on the sawmill nigger. Bandsaws came into use in the Eighties. All along the line from headrig carriage to the mill yard various improvements and new inventions speeded the making of lumber.

It was in Muskegon, too, where a revolt of the workers first brought any results. Previous to this, a strike of sawmill employes in Williamsport, Pennsylvania, had caused considerable trouble, including the calling out of the Pennsylvania militia; but it had resulted in a complete rout, so far as employes were concerned. Men continued to work a twelve-hour day in the camps and sawmills.

This is the third of a series of four articles on lumber towns whose fame stands preeminent in the colorful history of American lumbering. The fourth and last article will describe Grays Harbor, Washington, at the heyday of its logging boom.

In the fall of 1881 employees of the Muskegon Booming Association, which handled all logs for the city's mills, went on strike for a ten-hour day. A thousand men paraded with banners announcing "Ten Hours or No Sawdust." The operators called for troops, which were sent and martial law declared. The strike fizzled out—until spring, when it was renewed, bigger and better than ever.

The operators brought in "detectives" from Mr. Pinkerton's Chicago office, and they imported strike-breakers from Ontario. There was some fighting and general violence. But in June of 1882 the strike was called off. Henceforth, ten hours was considered a day's work in western Michigan.

By 1882, which was Saginaw's biggest lumber year, Muskegon was still several years from its peak. In '82 Muskegon had a population of 20,000, of which 4,500 worked in the mills or on the booming grounds. When the drive was in, the city's population leaped overnight by another 3,000, as red-shirted men came down from the woods.

In the field of lumberjack entertainment the City of Muskegon possibly had no peer in the Lake States. One can tell something of a town's reputation for hospitality by the way bards treated its name, and lumberjack bards appear to have been partial to Muskegon. That city is mentioned in more logger ballads than any other along The Big Clearing from Maine to the Pacific Coast. Jack Haggerty's farewell, in the celebrated *The Flat River Girl*, alone should cinch Muskegon's place as lumberjack Mecca of the great white pine days. Sang Mr. Haggerty:

Then adieu to Flat River,
For me there's no rest;
I'll shoulder my peavey
And go on out West.
I'll go to Muskegon,
Some pleasures to find,
And I'll leave my own
Flat River darling behind.

Yes, sir, no mistake about it, Muskegon had attractions that brought in the boys from near and far. Loggers said they could detect the first whiffs of Sawdust Flats perfume and booze as far up-river as Big Rapids, some fifty miles away. Muskegon's Sawdust Flats were a part of town that had been

built on a sawdust "fill." It consisted principally of six long blocks that were "lathering in sin," as a local divine once observed. The Flats were maintained as a restricted area solely for the entertainment of the boys from the woods. Their fame spread and finally became deathless by reason of ballads written about them.

In another part of town was the unspeakable Canterbury, perhaps the most notorious hellhole in three states. The Canterbury was a combination saloon, hotel, restaurant, dance hall and so forth. Cock-matches were fought here; prize fights, too, and often dog fights. Female wrestlers appeared at The Canterbury in the Eighties. The motto of The Canterbury was "Everything Goes," and it got to be a saying among lumberjacks that you hadn't cut your eye teeth unless you had seen The Canterbury running full blast.

Muskegon also turned out some noted timber barons. The most colossal of the lot was Charles H. Hackley.



© William M. Harmer

Above — In a Michigan lumber camp of early days

Below — The Michigan woods was the birthplace of the "Big Wheels"



Hackley arrived at Muskegon on a steamer just before noon on April 17, 1856, with no money, no letters of credit, no friends. He went to work in a sawmill that afternoon. A short twenty years later he was a prime baron, and by the time of his death, in 1905, he was a veritable timber king.

During his life, which is said to have been a lusty one indeed, Hackley gave \$1,389,525 to the city that had treated him so well, and in his will he raised the ante to some \$6,000,000. Quite remarkable, in view of the general history of bequests of rich lumbermen, were the uses to which Hackley stipulated the money should be put. Hackley's money created parks, a fine library, hospitals, and schools. And he left a good round sum

a replica of an ox-yoke; Hazelton-Gerrish, a pair of glasses; and a brave duck swam on the ends of all Crossett's logs.

Not in Muskegon, but in that district, appeared the original high-lead logging machine. It was the invention of Horace Butters, an old State-of-Mainer who had settled in Ludington, Michigan. He called it Butters Patent Log Skidding & Loading Machine, and in all essentials it was simply the so-called high-lead apparatus that has been logging the West Coast timber for the past quarter-century. Butters' machine was little used in Michigan, but he took it South to log the cypress and southern pine before it emerged in the Pacific Northwest as something "new" early in the present century.



Shingle weavers of the Michigan Shingle Company at Muskegon—picturesque fellows, these—literally the "high hats" of the lumber camps of the 80's

for the purchase of oil paintings to be hung where the public could see them. A lumberman leaving money for the purchase of works of art and literature is something that doesn't happen every century.

But Muskegon logging operators and lumbermen appear to have been rather artistic. A glance at the designs of the log-brands they used to mark ownership of floating logs shows that they had imagination. On the logs of Alex Rodgers appeared a combination of cross and crescent; Torrent & Company had a big "B" within the circle of a saw; E. & C. Eldred, a water pitcher; O. Donald, a beer barrel bung; Davies & Whitney's mark carried what was possibly meant to be a warning. It was a gallows with a man, probably a log-thief, hanging therefrom. S. H. Boyce marked his logs with

Frenchmen from Canada had swarmed into the Saginaw country to help with the logging. Into Muskegon came a horde of Germans, fresh from the Old Country, and after them came the Scandinavians. Many of these last were imported by Louie Sands, Scandinavian himself, who was one of the boss-loggers of the Manistee District, north of Muskegon. Louie had them coming in by car- and boat-loads. They were able men and logging was nothing new to them. By the turn of the century Scandinavians were the dominating nationality, so far as numbers were concerned, in the logging woods of the Lake States.

A story of Louie Sands is still told in western Michigan. It is said that whenever a Swede logger wanted to quit his job in any camp (Continuing on page 188)

1938 EXPEDITIONS--

TRAIL RIDERS OF THE WILDERNESS

An Invitation to Explore
America's Last Fron-
tier Under the Direc-
tion of The American
Forestry Association

FOR the sixth consecutive year The American Forestry Association blazes the trail into the wild, little explored back country of America. Seven expeditions are planned for the Trail Riders of the Wilderness on a non-profit basis, the riders sharing equally in the cost of organizing and equipping each venture. Any man, woman, or older child in normal health and with a reasonable amount of riding experience is eligible to ride with one or more of the expeditions.

Two pioneering parties will take the field this summer, the first to explore the rugged Maroon Bells-Snowmass Wilderness of Colorado, the second to make its way to the summit of Mt. Whitney, highest mountain in continental United States, after exploring the wild Kings River Wilderness in the High Sierras of California. Five additional expeditions will return to primitive areas previously explored by the Trail Riders of the Wilderness. Expeditions for 1938 follow:

Expedition No. 1—Flathead-Sun River Wilderness, Flathead and Lewis and Clark National Forests, in Montana. Time, July 3 to July 15. Approximate cost, \$130 from Missoula, expedition headquarters. Here are a million acres of untrammelled wilderness, the country "at the back of beyond" where the Blackfeet Indians held their ceremonial sun dances and where Lewis and Clark found great herds of buffalo grazing in flowered valleys beneath the Shining Mountains. A country of lofty mountains, green forests, and sparkling lakes.

Expedition No. 2—Wind River Wilderness, Wyoming National Forest, in Wyoming. Time, July 18 to July 31. Approximate cost, \$170 from Kemmerer, expedition headquarters. In this roadless domain the Rocky Mountains sling up a rugged crest to form what is perhaps the most dramatic wilderness in continental United States. Unchanged since the day it was closely associated with that great old trader and guide, Jim Bridger, the country remains a citadel of



Trail Riders in the beautiful Olympic Wilderness

© Asahel Curtis

ice and rock, of timberline trees, of spectacular canyons, of nameless lakes and unsurpassed alpine flora.

Expedition No. 3—Gila Wilderness, Gila National Forest, in New Mexico. Time, August 1 to August 14. Approximate cost, \$125 from Albuquerque, expedition headquarters. Here, so close to Old Mexico that the Spanish influence still prevails, lies 600,000 acres of timber and grassland, of lonely trails, of black winding canyons, of buttes and mountains that reflect astonishing colors in the sun. Cliff dwellings, unrestored and in natural surroundings; canyons that are unequalled anywhere except by the Grand Canyon.

Expedition No. 4—Maroon Bells-Snowmass Wilderness, Holy Cross National Forest, in Colorado. Time, August 3 to August 16. Approximate cost, \$155 from Aspen, expedition headquarters. A wilderness so beautiful, so isolated, that the Ute Indians claimed it as their own. One of their great chiefs made annual pilgrimages there to be inspired and to commune with nature. A high and colorful land, studded with blue lakes, cut by roaring streams, and carpeted with green forests and abundant wild flowers. A pioneering trip.

Expedition No. 5—Sawtooth Wilderness, Sawtooth National Forest, in Idaho. Time, August 3 to August 16. Approximate cost, \$140 from Shoshone, expedition headquarters. A wild kingdom of mountains and pines and silver lakes—as inviting and as picturesque as any land under the sun. Its peaks are bold and rugged, many of them well forested; its lakes are irresistible to the explorer who seeks beauty—and good fishing. Here the famous Salmon River is born—here where sparkling waters mirror the Sawtooth crags in a wild splurge of grandeur.

(Continuing on page 185)

THE RANGER'S CORNER

On the Uinta National Forest, in central Utah, are raised some of the finest lambs put on the market from the Missouri River to the Pacific Coast. Therefore, it is only natural that flockmasters should have the deepest hatred of all predatory animals—from the lowly badger, blamed for the loss of many newborn lambs that fall into his holes and are unable to get out, to the ferocious mountain lion that kills sheep simply for the lust of killing.

In this section it is the boast that every shepherd is a white American, and that the handling of sheep is a well paid profession requiring the highest skill. Therefore, it is not surprising that many good men are found on the ranges. However, this story is not to boost either our lamb chops or the men entrusted with their care. It is meant, rather, to show to what lengths some men will go in order to protect their flocks.

Just before leaving the forest with his sheep in the fall, one Ephraim Bowers, who by his exploit is entitled to have his true name known, rode from his camp to bed his sheep for the night. He was mounted but unarmed, although it was his custom to carry a rifle on his saddle. Two dogs followed him, also a half-grown pup that was being initiated into the art of handling sheep. These dogs were of uncertain lineage and could hardly have been expected to show the courage they were later to display.

A circle was made round the sheep. Bowers then rode a short distance to put out salt where the animals would gather at dusk. The terrain consisted of rolling hills with a scattering cover of brush, cottonwoods along the small stream, and some piñon and juniper.

The dogs were hunting chipmunks in the brush when suddenly, a short distance ahead of the horseman, there was a terrific uproar—yelpings, snarlings and other strange noises. Bowers was in time to see a large mountain lion leap into the branches of a cottonwood tree, where he sat snarling defiance down at the dogs. They were trying to climb up beside him, with little success, but made it plain what they would do to the big cat if he would come down.

Bowers was in a quandary. It was

TREED

To Save His Reputation, a Shepherd Tackles
a Mountain Lion Barehanded

By George C. Larson

more than a mile over a rough trail back to camp and his rifle. Before he could return with the gun, he hastily reasoned, the cougar would probably make his getaway, to inflict several hundred dollars' worth of damage to his sheep. So he decided to remain and battle him unarmed. Some time before a lion had killed twenty-five pure bred sheep in a single raid, and Bowers felt that his reputation as a herder was at stake if the same should happen to him.

After tying up his horse some distance away, he cut a stout, green chokecherry limb and gathered an armful of rocks. He noticed that he had an advantage in his attack as the ground rose abruptly near the tree occupied by the cat, enabling him to get up rather close and nearly on level with him.

The first missiles only infuriated the lion. He roared each time he was hit. A second armful of stones convinced him, however, that he would do well to seek shelter from the unmerciful clouting. So he gathered all four feet against the bole of the tree and launched himself backward into space, on the lower side, lighting on his feet in true cat fashion. Bowers estimated that this leap carried the cat more than thirty feet from the tree.

Both dogs were on him the second he hit the ground, so he leaped into a piñon. There he sat, only ten feet above the ground, striking down at the dogs below him. Bowers gathered more ammunition, feeling that he was now in position to deal some real punishment to the animal. After several bulls-eyes to the head, the lion jumped and landed in a low juniper. Then he was on the ground battling with the dogs for a brief spell. Both were wily enough to keep out of reach, but would nip his flanks at every opportunity. The pup was having

the time of his young life, but like all puppies his feet were too large. He could not dodge quickly and the cat dealt him a blow which rolled him a dozen feet. Bowers did not see the pup again until he arrived at camp, when he was found under the bunk, from which point of safety he had to be removed by force.

Bowers gathered rocks and with sure aim drove the cat from one tree to another until he was so groggy that he had difficulty in climbing. When he fell from a tree the green club was used, while the dogs drew the animal's attention, and when he climbed another he was stoned down. The dogs, almost exhausted, would lie under the tree until the cat was driven out. Then they would worry him until he climbed another.

The cat was both willing and anxious to call off the fight at any time, but as often as the man drove him from a tree the dogs were upon him. He seemed to blame the dogs. At no time did he make a serious attack upon the man.

Finally the cougar folded his paws and gave up the ghost. The time since the attack began had not seemed long to Bowers, but upon consulting his time-piece it was found that more than two hours of hard work and excitement had passed. During that time there had been something doing every minute.

The lion was skinned and proved to be a male measuring eight feet, four inches from tip to tip. A half eaten fawn deer was found at the point where the dogs first jumped the cat.

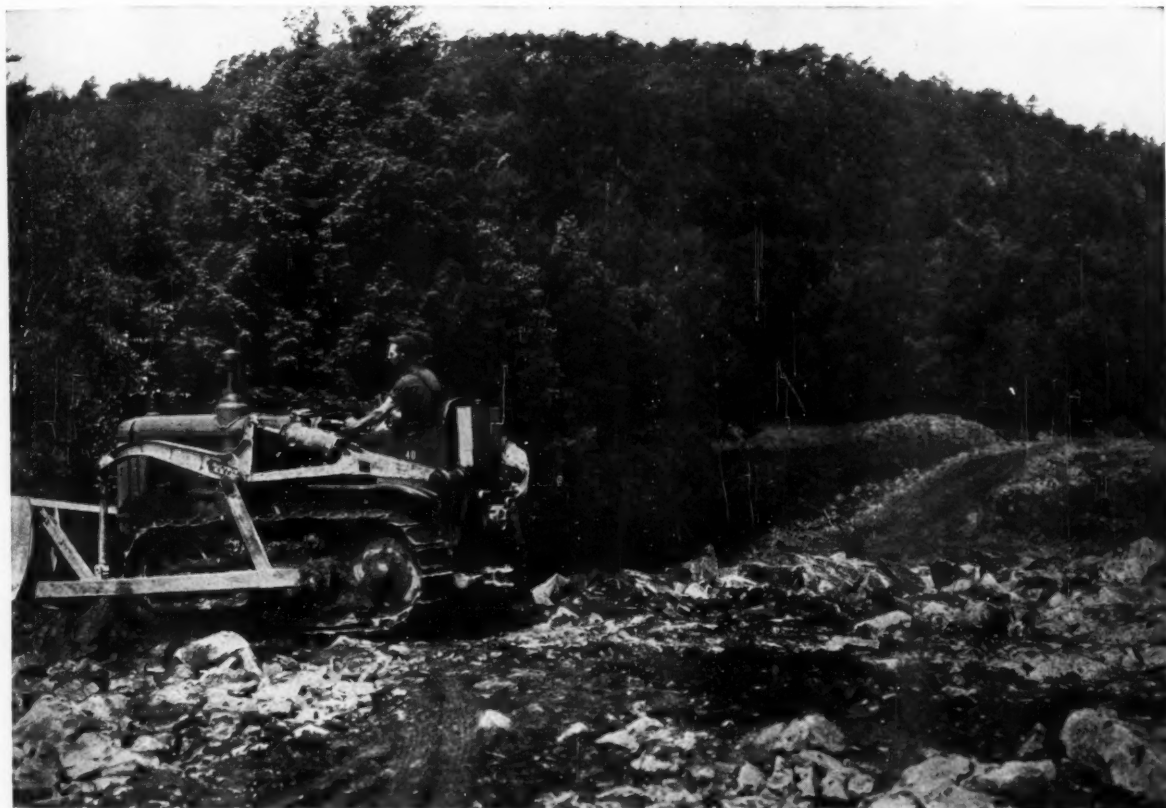
The next day and for many days thereafter Bowers could not raise his right arm. Even after several months that member had not regained its usual elasticity.

Bowers says "never again," considering the risk too great, but he also says that the eighteen dollars he received for the hide was compensation for the strenuous labor. The sport of killing a full grown lion without firearms was worth the risk he ran, he declared. He also tells of being turned down for life insurance by an agent who stated that, while he needed the business, he would feel like a traitor to his company if he wrote up a man who would tackle a hale and hearty lion barehanded.

NATIONAL WILDLIFE WEEK

President Franklin D. Roosevelt, through a presidential proclamation, has designated the week beginning March 20 as National Wildlife Week, and called upon "all citizens in every community to give thought during this period to the needs of the denizens of field, forest, and water and intelligent consideration of the best means for translating good intentions into practical action in behalf of these invaluable but inarticulate friends." The carrying into effect of any program for the conservation of our hereditary wildlife, the President stated, must enlist the support of all citizens. Only through the full cooperation of all can wildlife be restored for the present generation and perpetuated for posterity, he said.

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An International TD-40 Diesel TracTracTor owned by the Lane Construction Co., Meriden, Conn. When this picture was taken it was building a new road bed from the Cadillac Mountain Road to Ocean Drive in Acadia National Park, Bar Harbor, Maine. It moved 350 yards every 10 hours, using 1½ gallons of 7-cent Diesel fuel an hour.

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GRAVES ENDORSES PRINCIPLE OF PUBLIC REGULATION

In response to a request for comment on Chief Forester Silcox's advocacy of public regulation for private forest operations as set forth in his Annual Report for 1937, Henry S. Graves, Dean of the Yale Forestry School, and a former Chief Forester, said that he endorses the principle of public regulation. Without specifying the type or manner of application Mr. Graves asserted it has become "increasingly evident that some type of control in forest land use is essential to bring about stability of land ownership, industrial stability and the continuation of the manifold services of the forest." Some form of control through constituted public authority he believes to be inevitable. His statement in full follows:

"Chief Forester F. A. Silcox, in his Annual Report for 1936 to 1937, presents a three-point program to guide the development of a national policy of forestry. He includes public regulation of private forests as one of the three major features of the program. He sets forth the principle of public regulation without specifying the manner of its application. I endorse the principle.

"It has been increasingly evident that some type of control in forest land use is essential to bring about stability of land ownership, industrial stability, and continuance of the manifold services of forests. The lumber and timber products industries undertook to introduce such controls through the NRA codes under industrial direction and under federal auspices. Specific industrial groups are now endeavoring to work out controls of forest practice through Association effort. I doubt the success of these efforts without the participation of the public through legislative authority, which would bring all owners under a common system of controls on the land. Public regulation is intimately related to public cooperation with private owners. In the long run there will be insistence by the public that if extensive grants in aid are provided for cooperation with private owners there be definite assurance against continued depletion of the forest resources. Final control through constituted public authority is, in my opinion, inevitable. It is time to face this problem squarely, and I am glad that Mr. Silcox has spoken."

FECHNER ANNOUNCES REDUCTION OF CCC CAMPS TO 1,210

Robert Fechner, director of the Civilian Conservation Corps, announced early in March that the number of CCC camps in operation will be reduced from 1,501 at present, to 1,210 before the end of the current fiscal year. The operating program for the balance of the fiscal year, he said, provides for the transfer of approximately 100 camps to new or previously occupied camp sites on March 31 and the closing of 291 camps between May 31 and July 1. Ten additional camps, now at work in the Winooski River Valley, in Vermont, on the Winooski River Flood Control project, will be closed prior to October 31.

The CCC operating program for the final quarter of the fiscal year provides for the maintenance of an enrolled strength of 260,000 young men and war veterans and approximately 10,000 Indians and territorials. In order to maintain the strength of the CCC at 260,000, arrangements have been made to enroll approximately 55,000 young men and

2,000 war veterans as replacements during a replacement enrollment period running from April 1 through April 20.

The 291 camps to be closed between May 31 and June 30, by states, follow: Alabama, four; Arizona, four; Arkansas, six; California, fourteen; Colorado, four; Connecticut, two; Delaware, three; Florida, four; Georgia, six; Idaho, eight; Illinois, seven; Indiana, seven; Iowa, seven; Kansas, four; Kentucky, five; Louisiana, six; Maine, one; Maryland, eight; Massachusetts, four; Michigan, ten; Minnesota, nine; Mississippi, seven; Missouri, seven; Montana, three; Nebraska, two; Nevada, one; New Hampshire, one; New Jersey, eight; New Mexico, six; New York, sixteen; North Carolina, nine; Ohio, five; Oklahoma, five; Oregon, eight; Pennsylvania, eleven; Rhode Island, one; South Carolina, five; South Dakota, four; Tennessee, six; Texas, fifteen; Utah, six; Vermont, three; Virginia, eleven; Washington, fourteen; West Virginia, five; Wisconsin, eight; and Wyoming, two.

REMEMBER!

The dates for the Sixty-Third Annual Meeting of The American Forestry Association are May 5, 6 and 7. The place is Old Point Comfort, in the heart of Colonial Virginia. Headquarters, the famous old Chamberlin Hotel, overlooking Chesapeake Bay and Hampton Roads. Visit old Williamsburg, Yorktown, the Dismal Swamp and other historic places under the guidance of the Association, the National Park Service and the Colonial Williamsburg Restoration. Full story of the meeting on page 150. Make your plans now to attend.



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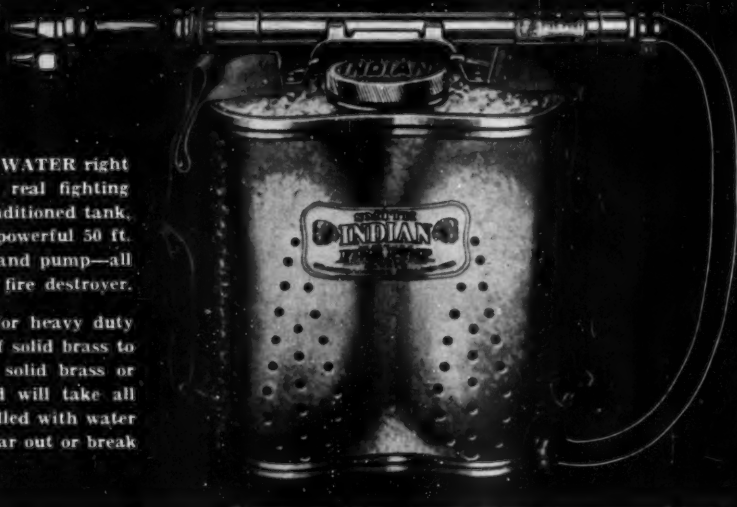
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REORGANIZATION BILL BEFORE SENATE

Friends of forestry and conservation scored two major victories in the Senate on March 14, when after two weeks of debate on the government reorganization bill, S. 3331, amendments were adopted eliminating sections which would have changed the name of the Department of the Interior to Department of Conservation and authorized the President, with the consent of the Senate, to make all appointments to departmental positions which are considered "policy determining in character."

On the same day an amendment was adopted limiting the period during which the President shall have power to carry out the provisions of the act, to July 1, 1940.

On the following day, the Senate voted to abolish the three-man Civil Service Commission and set up in its place a single Civil Service Administrator to be appointed by the President for a term of fifteen years. The new administrator, who is to be appointed without regard to political affiliations, must be confirmed by the Senate and will receive \$10,000 a year.

In the program set up by The American Forestry Association and numerous co-operating organizations throughout the country, there remains only the passage of an amendment which will clearly protect the Forest Service, Biological Survey, and Soil Conservation Service from any possible transfer out of the Department of Agriculture.

Directly in line with these interests of conservation is Senator George's amendment which would withhold presidential power "to abolish, or transfer to any other agency, the whole or part of any agency or activity of the Department of Agriculture dealing with native or domesticated plant and animal production, or with soil or water conservation."

Another amendment introduced by the newly appointed Senator Reames of Oregon would make impossible the transfer of the "Forest Service in administering any laws relating to National Forests."

The George amendment is sufficiently broad to protect the Forest Service, Biological Survey, and Soil Conservation Service, but Secretary Wallace's statement of February 16, as reported in *AMERICAN FORESTS* for March, has caused several Senators to assume feeling of security for these bureaus.

That this is a matter of grave concern in the minds of many is indicated by the continued reference to it on the floor of the Senate. As late as March 15, Senator Borah declared—"if the pending bill should be enacted as it is now written, including the amendments which have been offered by the able Senator in charge of the bill, the President would have the power to transfer the Forest Service to the Department of the Interior."

Again during March 1 Senator Pope of Idaho, referring to Secretary Wallace's statement, concluded, "I am con-

vinced that there is no further danger whatever of any such transfer." This was in spite of Senator Byrd's further warning that "under the provision of the bill the President has the right, of course, to make the transfer and he endorsed the report that recommended a transfer."

The President "cannot abolish the office of the Secretary of Agriculture, but he can abolish everything else except the name and title of the Secretary of Agriculture," according to Senator Wheeler during his discussion of the bill on March 8. The same principle would apply to any other bill.

On the same day, Senator Wheeler stated on the floor of the Senate:

"A controversy has been going on between the Interior Department and the Agricultural Department. The Interior Department has been seeking control of a certain activity and the Agricultural Department said it should stay where it is, in the Agricultural Department. I have not any interest at all in the matter, excepting that I know that all the stockmen, all the cattlemen, all the sheepmen, all those who have been interested in preserving the National Forests from destruction by fire, and all the people who come in contact with them, have petitioned and said, 'We do not want the Forest Service transferred.' It was generally reported that it was to be transferred. I think every Senator from the West knows that to be the case; and they do not want it done because they cannot see that they will have more efficient service under such an arrangement, and, as a matter of fact, I think the Forest Service is more efficient in the Agricultural Department. I think the Forest Service should be and should remain there as a matter of efficiency. I think everyone who is familiar with it knows that that is so and knows the reasons why it should be in that Department."

Following passage of the reorganization bill by the Senate, it must be referred to the House for approval, at which time it may be subject to further amendments. Meanwhile, the House, having divided government reorganization into four parts, has passed two bills. On July 27, 1937, H. R. 7730 was passed to provide six administrative assistants to the President, and H. R. 8202 passed on August 13, to reorganize government agencies and create a Department of Welfare. These two bills have been referred to the Senate Select Committee on Government Organization, but not having been reported, are not on the calendar.

On the House calendar are two other bills, H. R. 8277 to establish a one-man Civil Service Administration to replace the present Commission of three, and H. R. 8276 to create the office of Auditor General. The substance of these, like that of the first two, is included in the Senate bill, and no further House action is expected until after the Senate has disposed of S. 3331.



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GREATER SHELTERBELT PLANTINGS PLANNED FOR 1938

Farmers in the Plains States are asking for increased planting of shelterbelt strips under the Prairie States Forestry Project, reports the Forest Service. They are encouraged by shelterbelts only three years old with some trees already twenty-five feet high and of fence post size.

Plantings under the Project—authorized by Congress last year—are a continuation of shelterbelt planting begun in 1935 with emergency funds.

In six states 4,300 miles of shelterbelt plantings have been allotted for 1938—about sixty per cent more than were planted in the three previous years. A total of 125 miles of shelterstrips was planted in 1935, together with some 6,500 acres of solid plantings. The 1936 and 1937 shelterstrip plantings were respec-

tively 1,152 miles and 1,329 miles.

Shelterbelt mileage quotas for 1938 are: North Dakota, 350 miles; South Dakota, 400 miles; Nebraska, 900 miles; Kansas, 800 miles; Oklahoma, 1,050 miles; Texas, 800 miles. The spring planting season, which began several weeks ago in Texas, will end in May in the Dakotas.

The Forest Service reports that good young trees from proper sources, properly planted, protected and cultivated have made it possible to obtain relatively high survivals of tree belts even with drought which in 1936 was most severe. The average survival for the six states for all plantings to date is seventy per cent of the 44,000,000 trees which have been planted.

QUETICO-SUPERIOR COMMITTEE REPORTS

Two major steps remain to be taken in order to complete the Quetico-Superior project calling for an International Wilderness Sanctuary embracing the boundary and tributary lakes lying between Minnesota and Canada, according to the report of the Quetico-Superior Committee appointed by President Roosevelt on June 30, 1934. The Committee's report on the project was released by the President on February 25.

After reviewing what has been accomplished during the past twelve years to further the project, the report lays down in very specific manner the two major things that remain to be done in order to make the undertaking a reality. They are acquisition of title by the Federal Government to all lands privately owned in the Minnesota portion of the area, and negotiations for a treaty between the United States and Canada assuring permanent administration of the area in conformity with the Quetico-Superior principles.

The first, the committee states, is a desirable but not essential preliminary to the second. It emphasizes that speed is called for in completing both steps "in order to minimize the number of harmful developments that now constantly threaten one part or another of the area." The pressure of road building into the sanctuary, the regulation of privately owned dams within the area and demands for new dams for power exploitation are pointed out as major dangers in destroying the wilderness character of the region.

According to the Committee, there are within the American portion of the proposed sanctuary 900,000 acres exclusive of the public land now within the Superior National Forest which should be acquired by the Federal Government. The cost of acquisition is placed at \$2,250,000, although a million dollars would acquire sufficient land to bring about very effective control of wilderness assets. In the event emergency funds are not available for these needed purchases, the committee holds a special appropria-

tion from Congress is well justified.

Stating that no plan of regulation designed to preserve the wilderness character of the area or its recreational possibilities can be fully effective without joint and coordinated action by Canada and the United States, the Committee urges treaty action at as early a date as possible. In the event treaty action is not feasible, concurrent legislation by the two governments concerned is proposed.

Commenting on the Canadian attitude toward the project, the Committee reports: "There yet remains the task of harmonizing the views of the two countries. What obstacles may arise in Ontario or how much time may be required, is difficult to predict. It is proper to point out, however, that the Ontario portion of the lakeland is much larger and contains much more valuable resources from a recreational point of view than the Minnesota portion. Because the Province of Ontario has ownership of lands and timber, the consent of that Province to any treaty by the Dominion is essential. This Committee is informed that it will be possible for the Province to enter into an agreement with the Dominion, upon the basis of which the Dominion will be in position to negotiate a treaty. The present government of Ontario has never passed officially upon the Quetico-Superior program and any attempt to secure the consent of the Ontario government is certain to be fought by the same interested private groups who have opposed the project in Minnesota. The Committee is glad to report, however, that Dominion officials have been outspokenly favorable to the program. . . .

"Relations with Canada are more friendly than at any time within memory. The time, therefore, seems ripe for setting a precedent in international accord. The establishment of such a precedent depends largely upon the support of the Administration. If the full force of that support can be exerted at the present time, the prospects for success are more favorable than at any previous period."

KNOWING YOUR TREES

By G. H. Collingwood

AMERICAN ELM

Ulmus americana, Linnaeus

THE dignified and gently swaying American Elm is characteristic of the northeastern landscape and has been planted over most of the United States. Typically, somewhat, it sometimes develops heavy leaning limbs after the manner of the oak.

Elm belongs to the family "Ulmaceae"—the family of the white Birch. The genus *Ulmus*, which is the ancestor Latin name for elm, has sixteen species distributed in the north temperate countries of the world. Six elms are native to eastern North America, with *Ulmus americana* the largest and most important. None are native west of the Rocky Mountains, but they grow successfully in all western states.

American elm is known as white elm, and sometimes as water or soft elm. It grows naturally in river bottoms and on low fertile hills, from southern Newfoundland to central



In summer the Elm exhibits green and deeply veined leaves, while in winter it reveals the shape of its limbs and branches above a steady frost.

Florida, and west beyond the northern shores of Lake Superior to the Turtle Mountains of North Dakota. It thrives up the water courses to the base of the northern Rockies. Its western limits are confined to stream banks in western Nebraska, central Kansas and Oklahoma, through central Texas to the Gulf of Mexico.

The main trunk of open grown trees divides at ten or twenty feet to form a broad crown, while in the forest trunk heights of thirty to sixty feet are attained. Trees two to four feet in diameter and eight to one hundred feet high are common, but elm eight to eleven feet in diameter and 120 to 140 feet high have been known.



24

The elongated, double-toothed, alternately placed, sharp pointed leaves are two to five inches long and one to three inches wide. Evenly spaced, parallel veins extend from the midrib to the serrated edges. The upper surface is slightly rough while the under surface is soft hairy. In early autumn the leaves turn golden yellow, then scarlet and finally leave the tree bare.

At the base of each short petiole or leaf stem is a blunt pointed, smooth, slightly flattened bud, which appears to be at one side of a semi-circular leaf scar after the leaves drop. Before the leaves are fully open, in May or June, the seeds ripen. They are flat, entirely surrounded by a broad, slightly hairy, papery wing, which rarely exceeds three-quarters of an inch in diameter. If planted immediately, most of the seed will germinate in a few days, but some may lay dormant until spring. Each seed develops from an inconspicuous light green perfect blossom with red stamens. They hang in clusters and are produced before the leaves, when the tree appears as if covered with a purple glow.

The wood is light brown, heavy, hard, tough, so cross-grained as to be difficult to split, and weighs three to thirty-five pounds to the cubic foot when air dry. It has a broad area of lighter colored sapwood. Because of its toughness it is used for the hulls of ships and for hoops and staves in slack coopers; for shipbuilding, furniture, flooring, sporting goods, boxes and crates. Relatively easy to season, it works fairly well, and while it can be secured to a clean white surface, does not polish easily. The frequent failure of western New York wood for cannon and twisted it into ropes.

In 1933 the total cut of all elm lumber in the United States was 66,719,800 board feet as compared with 175,653,600 board feet in 1929. Nearly one-half of the 1933 cut was produced in Wisconsin and Michigan.

American elm grows from seed, sprouts readily from the stump and from root ends. The cultural types may be reproduced by cuttings, buds and grafts. Preferring rich, deep, well drained loam, it will grow in almost any soil. The vigorous, shallow, fibrous root system permits comparatively easy transplanting until the tree reaches large size. The roots reach out long distances for water, occasionally entering and clogging drain pipes whose joints are not thoroughly sealed.

Of all elm pests, the elm leaf beetle is chief. By eating the leaves this beetle and its larvae occasionally kill trees, but like other insect pests it can be controlled. Perhaps more to be feared is the Dutch Elm Disease.



Natural range of American Elm in the United States



One side of each leaf is larger than the other, and parallel veins run directly from the midrib to the serrated edge.



Blossoms of light green blossoms appear 4 to 6 weeks before the leaves.



The dark, woody heart of the main trunk is one to one and a half inches thick, with underlying rays visible.

For which no cure has been discovered. In spite of its common, however, American elm is a popular shade tree and its ability to reproduce under forest conditions encourages its use in hardwood forest management.

25

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NEW BOOKS

GERMAN FORESTRY, by Dr. Franz Heske.
Published by Yale University Press,
New Haven, Connecticut. 342 pages.
Illustrated. Price \$3.00.

Ever since forestry began in this country, it has been deeply influenced by the experiences of German-speaking countries in the management of their forests through many centuries. Knowledge of these experiences and the techniques growing from them have had to be obtained largely through special visits abroad or from such limited texts and articles as have become available from time to time. It is surprising that heretofore there has not been available to American readers a complete and authoritative book dealing with the development of German forestry and the part it has played in the lives of the German people.

German Forestry fulfills this long standing need for English-speaking people. It is particularly adapted to American use because it is written for the express purpose of making available to the people of the United States the experiences of the German countries in the field of forestry. Written by Dr. Franz Heske, Professor in the Forstliche Hochschule Tharandt Bei Dresden, the book is a contribution of the Oberlaender Trust of the Carl Schurz Memorial Foundation

in pursuance of its work of making available to America the forest policies and techniques developed by German-speaking countries.

German Forestry begins with the Carolingian dynasty and traces through to the Third German Reich. To be sure, it deals more largely with the development of progressive land use and forestry during the last fifty or one hundred years, but this is as it should be, because Americans are more interested in the results of hundreds of years of forest experiences than in a detailed history of those experiences.

A reading of the book gives one a clear picture of German forestry at it has been developed to date—a picture not to be found elsewhere. It is particularly timely from a land use standpoint because it treats of the place and management of forests in countries where population has exerted a steadily increasing pressure upon land. This same pressure is beginning to be felt in the United States and the German experience in the development and application of silviculture, methods and management, will be found highly suggestive and valuable to American foresters and lumbermen and to all others interested in land management and forest conservation.—O. B.

Just Published. A new book containing full information about the world's most successful system of forest preservation.

GERMAN FORESTRY

By **FRANZ HESKE**

With a preface by **Henry S. Graves**,
Dean of the School of Forestry, Yale University

German forestry has long been regarded by informed observers as the most advanced in the world. In this book Dr. Heske, who knows both American and German forests and the problems their preservation creates, tells how Germany has cared for this natural resource so that only four per cent of the country is wasteland.

The book will be of great value to American foresters and to other people concerned with the conservation of our trees and the connected problems of flood control and soil erosion.

Illustrated.

\$3.00

YALE UNIVERSITY PRESS, New Haven, Connecticut

UP TRAIL, by A. A. Wickenden. Poetry
Publishers, Philadelphia, Pennsylvania.
78 pages. Price \$2.00.

One senses the lure of the trail to wild places—the call of the river—valleys where the black eagle soars—heights that birth the rushing streams—aye, even to the foot of the rainbow with its pot of gold this poet leads us—"Up Trail"—with his songs of the wilderness.—L. M. C.

THE CAMPERS' HANDBOOK, by Dillon Wallace. Published by Fleming H. Revell Company, New York City. 289 pages. Illustrated. Price \$2.00.

With spring here and summer approaching, comes the wanderlust. Many would go camping, but those who most enjoy their days and nights in the open, plan well ahead for their comfort and convenience. Dillon Wallace, a camper and explorer of wide experience, helps complete the plans and inspires to new adventure in "The Campers' Handbook."

One finds here, set forth clearly and readably, helpful information for the hiker or automobile tourist, the canoeist or the horseback rider. The book contains a wealth of suggestions for making the trip more enjoyable. Not only are there definite suggestions for shelters, bedding, clothing, and equipment, but one chapter lists foods, and another gives directions for their preparation.—G. H. C.

OLD WILLIAMSBURG AND HER NEIGHBORS, by William O. Stevens. Published by Dodd, Mead and Company, New York. 335 pages. Illustrated. Price, \$3.00.

To the readers of AMERICAN FORESTS, Author-Artist Stevens' informal history of Colonial Virginia is particularly timely. Early in May The American Forestry Association will hold its 63rd annual meeting in this region, visiting Williamsburg and her neighbors—following, as it were, in the footsteps of the talented author-artist. To those planning to attend this three-day meeting, Mr. Stevens' fascinating recital of his journey will prove not only a guide but a friend. To those who cannot attend, the book will bring a great deal of the mellow charm and tradition of our historic countryside.

The book is profusely illustrated with the author's pen and ink drawings, with a frontispiece in color. It is history; it is narrative; it is anecdote; it is legend. It is, from cover to cover, the story of Williamsburg and her neighbors. No one interested in history, romance and nature should be without it.—E. K.

BIRDS AROUND THE YEAR, by Lorine Letcher Butler. Published by D. Appleton-Century Company, New York. 242 pages, illustrated. Price \$2.00.

As the title indicates, this book is organized on a seasonal scale—picturing the life cycle of the birds consecutively through spring, summer, autumn and winter. Starting off with the bluebird, that charming herald of the spring, it follows through with typical species in vivid description of characteristics and habits, as the seasons develop. The author rounds out this attractive plan with many supplemental topics of fascinating interest, which make the book a companion to be treasured by lovers of birds all through the year.—L. M. C.

FIELD MANUAL OF TREES, by John H. Schaffner. Published by R. G. Adams & Company, Columbus, Ohio. Fourth Edition. 160 pages. Price \$1.50.

Covering every tree in the northern United States and southern Canada west to the Prairies, with this book in your pocket quick and sure identification in your field tree studies is certain. Each species is briefly described,—a carefully chosen single English name being given, with synonyms in the index. And there are four complete descriptive keys: twigs; twig with leaves; fruit, and twig with flower. The terms are in agreement with the International Rules of Botanical Nomenclature but a great improvement in the phylogenetic arrangement of the larger groups has been made. This segregation, and the progressive sequences thus shown, give a much better idea than heretofore of the evolution of the simpler to the higher forms.—L. M. C.

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FORESTER RESIGNS FROM TVA

Edward C. M. Richards, chief forester of the Tennessee Valley Authority, has resigned to resume consulting forestry work. Mr. Richards has been in charge of the TVA forestry work since its inception. In announcing his resignation, he stated that the suggestion had been made to him "that because my philosophy and general approach to TVA matters were out of line with the policies of those who are at present directing the activities of the Authority, it might be better for all concerned for me to tender my resignation."

Mr. Richards' resignation took effect January 31. Upon leaving he expressed enthusiasm for the TVA project, particularly its conservation phases. "It has been a pleasure to have a part in striving toward the conservation objectives which the Authority is working for," he said, "and I shall always take a keen interest in following the development of the TVA and of the particular conservation objectives as of tremendous value for other parts of the country."

At the time of going to press, his successor had not been announced.

GERMAN FORESTERS TO VISIT AMERICA

A group of German foresters will arrive in the United States during April for a two weeks' visit. The party is under the sponsorship of the German Forest Magazine and the North German Lloyd Bremen Lines with the German Department of Forestry cooperating.

The party will arrive in New York on April 15th and will proceed to Washington where it will spend several days. From there its itinerary will take it to the Tennessee Valley to study the TVA and to visit National Forests and Parks in the southern Appalachians. Going to Asheville, the German foresters will then inspect a number of wood-working plants in that region and return to New York, sailing for Germany on April 30.

DISEASE THREATENS PERSIMMON TREES

The persimmon wilt, a form of *Cephalosporium*, is reported to be spreading in central Tennessee to a degree constituting a real threat to the persimmon trees of that region. Portions of Rutherford and Cannon Counties are said to have lost more than eighty per cent of their persimmons.

Little is known concerning the disease, which shows itself as a wilt, causing leaves to be small and colorless, with death following shortly after these outward evidences. Hot, dry weather, following an extended wet period, appears to accelerate the action of the disease.

O AND C TIMBER SALES CONTINUED

Regulations for the emergency sale of timber on the Oregon-California railroad land grant and the Coos Bay Wagon Road tracts of revested land in Oregon were approved by Secretary Harold L. Ickes on February 14. This reverses an announcement of December 4, 1937, which proposed to withdraw these timber tracts of some 2,500,000 acres from sale, pending March 1, 1938, when the Department of the Interior will assume full control

of the lands under the Act of August 28, 1937.

The sale of timber under the regulations as now approved will prevent possible shut down and unemployment in portions of the lumber industry in Oregon.

"The comprehensive land-use conservation program contemplated by the Act will require extensive field examination and classification of all the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands," Secretary Ickes explained.

FORREST H. COLBY DIES

Forrest H. Colby, long associated with forestry in New England, died at his home in Bingham, Maine, Friday, February 11, following an emergency operation. Mr. Colby was sixty-nine years of age and had served the forest interests of Maine for more than fifty consecutive years. As a boy of nineteen he entered the lumber industry and worked his way up to responsible positions in different lumber and pulp and paper companies. He served two terms in the Maine House of Representatives and two terms in the Senate, following which he was for six years Commissioner of Fish and Game and State Forest Commissioner. At the time of his death, he was an officer of the Maine Seaboard Paper Company.

DUKE ESTABLISHES GRADUATE SCHOOL OF FORESTRY

A graduate school of forestry will be launched at Duke university next fall, culminating seven years of preparation toward this end. It will be the third graduate school of forestry to be established in the United States, the others being at Yale and Harvard Universities.

Dr. Clarence F. Korstian, who has been director of the Duke Forest since 1930, is dean of the new school.

The school will begin with a full-time faculty of seven professionally trained foresters, in addition to two instructors in botany from the regular university faculty and an administrative staff.

Present members of the school's faculty, in addition to Dean Korstian, who is professor of silviculture, are: T. S. Coile, assistant professor of forest soils; Dr. Ellwood S. Harrar, associate professor of wood technology; Dr. Paul J. Kramer, assistant professor of botany; William Maughan, associate professor of forest management; Francis X. Schumacher, professor of forestry; Roy B. Thomson, associate professor of forest economics; and Dr. F. A. Wolf, professor of botany.

There will be no undergraduate degree offered by the school. The school will accept for entrance men who have received their bachelor's degree from other universities, as well as those completing the pre-forestry course at Duke. The Master of Forestry degree will be available to such men in one or two years, depending upon their previous training. The M.A. and Ph.D. degrees will be given for work in the scientific phases of forestry through the university graduate school. For this work the school of forestry staff will serve as members of the forestry division of the graduate school.

ADDITIONAL FUNDS REQUESTED TO FIGHT ELM DISEASE

House Joint Resolution 606, calling for "an additional \$3,000,000 for eradication of the Dutch Elm Disease in America," was introduced on March 3 by Representative Charles A. Eaton of New Jersey.

Prefaced by a statement concerning our national asset of \$750,000,000 in wild and planted elms, the resolution warns against their threatened destruction by the disease which has doomed similar elm trees in European countries. It furthermore requests that the money be made immediately available and remain so during all of the fiscal year 1939.

"Provided the work already started by the Secretary of Agriculture in cooperation with the several states is vigorously prosecuted," says the resolution as a final note, "the work already done on the disease in this country demonstrates that ultimate eradication is possible."

Since 1930, when the disease was first identified in Ohio, over 4,000,000 elm trees have been felled in eradication activities, of which 28,268 were actually infected. Federal and state agencies have spent \$12,140,733.

THIRTY-TWO NATIONAL FORESTS ENLARGED

Approval for the purchase of 104,778 acres of land to be added to thirty-two National Forests and purchase units has been given by the National Forest Reservation Commission.

The acquisitions are to be made chiefly in the Southern and Lake States regions. The net cost will be \$331,184. Areas of 6,282 acres in Utah—being purchased for flood control projects at a cost of \$20,125.71—will be paid for out of 1937 receipts from the Uinta and Wasatch National Forests.

The Commission approved the purchase of 5,193 acres within a few miles of Eagle River, Phelps and Three Lakes, Wisconsin, for the Nicolet National Forest.

Purchases in Minnesota will total 33,881 acres along the International Boundary waters of the Superior National Forest.

Two areas approved for purchase in the Nantahala Forest, in North Carolina, are near the Joyce Kilmer Memorial Forest.

A purchase approved on the Shawnee purchase unit in Illinois helps to supplement the Pounds Hollow recreational unit now being developed.

Acquisition of 410 acres on the Arrow-rock purchase area in Idaho will continue a specific program of the Forest Service to minimize erosion on the Boise reclamation project valued at \$55,000,000.

A total of 10,303 acres on the Ottawa National Forest, in Michigan, were recommended for purchase as a step in the plan to prevent complete exploitation of its timber resources.

The Commission also approved for purchase 3,440 acres in the Tahoe National Forest, California, for \$16,500.



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ASK THE FORESTER

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QUESTION: If a farmer posts his land against hunting, is it legal for him to hunt on this land?—M. R., Wisconsin.

ANSWER: In nearly all states, including Wisconsin, a person may post his property against trespassing and still hunt on this land providing he observes all regulations as to open seasons, bag limits, etc.

QUESTION: Can you furnish a list of state flowers?—C. J. B., Michigan.

ANSWER: Alabama, Goldenrod; Alaska, Forget-me-not; Arizona, Giant Cactus (*Carnegie gigantea*); Arkansas, Apple blossom; California, Golden Poppy (*Eschscholtzia*); Canada, Sugar Maple; Colorado, White and Lavender Columbine (*Aquilegia*); Connecticut, Mountain Laurel (*Kalmia latifolia*); Delaware, Peach Blossom (*Amygdalus persica*); District of Columbia, American Beauty Rose; Florida, Orange blossom; Georgia, Cherokee Rose; Idaho, Syringa; Illinois, Native violet; Indiana, Zinnia; Iowa, Wild rose; Kansas, Sunflower (*Helianthus annuus*); Kentucky, Goldenrod; Louisiana, Magnolia; Maine, Pine cone and tassel (*Pinus strobus*); Maryland, Black-eyed Susan; Massachusetts, Trailing Arbutus (*Epigaea repens*); Michigan, Apple blossom; Minnesota, Showy Lady's slipper (*Cypripedium reginae*); Mississippi, Magnolia; Missouri, Red Haw (*Crataegus*); Montana, Bitter-root (*Lewisia rediviva*); Nebraska, Goldenrod (*Solidago serotina*); Nevada, Sage Brush; New Hampshire, Purple Lilac; New Jersey, Violet; New Mexico, Yucca; New York, Rose; North Carolina, Daisy; North Dakota, Wild Prairie Rose (*Rosa arkansana*); Ohio, Scarlet Carnation; Oklahoma, Redbud; Oregon, Oregon Grape (*Berberis aquifolium*); Pennsylvania, Mountain Laurel; Rhode Island, Violet; South Carolina, Yellow Jessamine (*Gelsemium sempervivens*).

QUESTION: Are specimens in the Petrified Forest National Monument in Arizona originally trees which grew near where the logs now lie, or do they represent driftwood carried in from some unknown source?—S. R. A., Ohio.

ANSWER: Park Naturalist M. V. Walker, stationed at Petrified Forest, has recently reported the location of more than fifty stumps in place. Some of these when excavated were twelve feet long with spreading roots at their base, indicating that the original trees grew where the stumps are now found. In addition to the upright stumps, he reports a large deposit of fossil leaves located within the monument.

QUESTION: Of two pitch pine trees cut at about the same time, one is completely rotten except for the limbs, while

in the other only the sapwood is decayed and the balance is very resinous. Can you explain?—B. S., Pa.

ANSWER: The two pines probably contained different amounts of heartwood. This being more resinous than sapwood is accordingly more resistant to decay. It follows naturally that a tree which is largely sapwood would go to pieces quickly, while one with considerable resinous heartwood is relatively resistant to decay.

QUESTION: Are there any blights or pests prevalent in the Adirondack and Catskill regions which might seriously affect the holding of privately owned timber over a period of years?—C. N. P., N. Y.

ANSWER: The forests of New York State are subject to numerous insect pests and fungus diseases, many of which must be reckoned with, but except for the chestnut blight none have proved so serious as to wipe out the values. Most important of the several pests are white pine blister rust—a fungus which affects the five needled pines, European spruce sawfly, Dutch elm disease, gypsy moths, and brown-tail moths. The last three are largely excluded from the areas in question, but remain a constant threat. Recognizing their potential possibilities, New York State is cooperating with the Federal Government in campaigns to control or eradicate these and other forest pests.

QUESTION: What causes wood to warp?—A. M., New York.

ANSWER: Basically, warping is caused by uneven drying of the wood. A growing tree contains more or less moisture within and between the fibres of the wood. These fibres together with the entire wood structure shrink or swell according to the amount of moisture they contain. When the tree is cut down and made into timber, the wood is then seasoned by exposing it to the air or placing it in a kiln so that the moisture will evaporate. Only by drying the wood under conditions that will permit the exterior to lose moisture at about the same rate as the surface can warping be avoided. Seasoned wood will retain its shape as long as the moisture content remains fairly constant. The ideal is to reduce the moisture content of the wood until it compares favorably with that of the surrounding air. Rain, moisture in the air, water in any form wetting one side of a plank more than another, or causing the surfaces to have more moisture than the interior, causes warping. If the wood is equally wet, or equally dry on both sides it does not warp. The shrinking and swelling takes place almost entirely across the grain of wood. For all practical purposes its length is unaffected by the moisture.

NATIONAL RESOURCES COMMITTEE REPORTS ON WATER

A six-year construction and investigation program for the utilization and conservation of the nation's water resources and a unified policy of water control and development are recommended in a report of the National Resources Committee, recently transmitted to Congress by President Roosevelt.

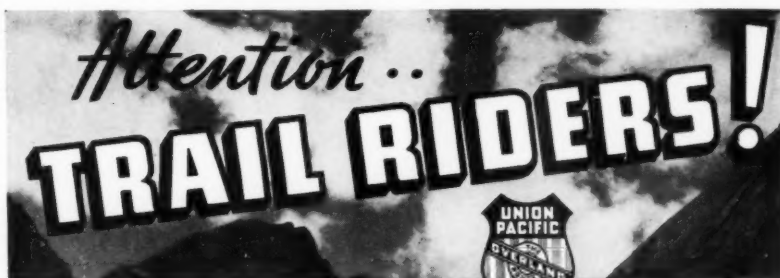
The report is a revision and extension of the program for the country as a whole recommended by the Committee in 1937. It outlines the principal problems of water control and use in seventeen districts into which the various drainage basins of the country are grouped.

It includes lists of primarily federal projects for a six-year period with a total cost of \$891,091,000,—approximately the same average annual expenditure for projects of these types during the last six years.

The flood control program recommended in the report provides for the continuation of many projects already authorized or under way. The interlocking problems presented by the Ohio and Mississippi Rivers, however, are considered so complex in character and so far reaching in their relationship to various unsolved problems of national policy that it is held unwise for Congress to authorize, at this time, any additional general flood-control plan for them.

The report recommends a series of suggested changes and reinforcement of reclamation policies. A special study of the basis of repayment is now in progress. The reclamation projects already authorized and started are estimated to cost over a period of years upwards of \$600,000,000 to complete. A general and comprehensive survey of the water resources and needs of the entire arid and semi-arid regions is needed, the Water Resources Committee says.

Previous recommendations of the National Resources Committee that a national water policy be formulated and followed are renewed. On this question the Committee says in part: "A unified plan of water control and development, in contrast to a medley of unrelated projects, calls for an integrated federal policy with respect to the various types of water problems in their interlocking relationships in contrast to a collection of more or less unrelated policies."



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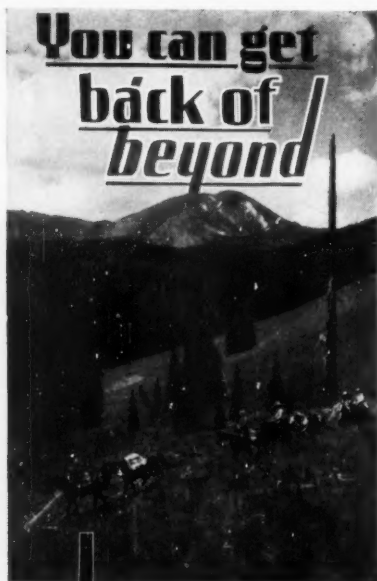
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FORESTRY IN CONGRESS

By G. H. COLLINGWOOD

Against a continued barrage of amendments by Representatives Taber, Rich, and Dirksen to secure major reductions, the Appropriation bill for the Department of the Interior passed the House on March 2 with few changes. It is now before the Senate Sub-committee on Interior Appropriations, of which Senator Hayden of Arizona is chairman, and hearings will be held before the bill is reported to the Senate.

The total appropriation of \$18,875,230 for the National Park Service is \$5,660 greater than the amount recommended by the Bureau of the Budget, due to adoption of the Dempsey amendment to increase Carlsbad Caverns National Park appropriations from \$94,340 to \$100,000. In defending his amendment Representative Dempsey presented figures showing that 201,337 visitors to the park during 1937 paid fees producing a total revenue of \$238,705.81. This, he declared, shows that for every dollar appropriated by the Federal Government, \$2.50 were returned. The additional money promises the employment of more adequate ranger and guide service that visitors may be taken through the caverns without unnecessary delay.

The Blue Ridge Parkway to connect the Shenandoah National Park with the Great Smoky Mountains National Park, leading through the States of Virginia and North Carolina, was renamed the Doughton-Blue Ridge Parkway to honor Representative Robert L. Doughton of North Carolina, Chairman of the Ways and Means Committee. For this and the Natchez-Trace Parkway, a total of \$3,996,200 was approved.

Efforts of Representative Rich to reduce appropriations for the Division of Grazing were unsuccessful, and the bill passed with an item of \$650,000. This is \$100,000 greater than the current appropriation and permits the use of \$100,000 to reimburse advisory committees of local stockmen for necessary travel expenses and to pay salaries of five dollars a day while the committee members are actually employed.

Receipts of the Division of Grazing for 1937 were \$535,501.06. Of this amount \$267,750 was returned to the states; \$133,875.25 was expended for improvements; an equal amount was turned in to the Federal Treasury.

The appropriation for the O and C lands item in the General Land Office was cut from \$250,000 to \$125,000. This reduction was required under the O and C Land Act of August 28, 1937. In passing the Independent Offices bill, the Senate sustained the cut of \$123,669,000 in CCC appropriations, which continue at \$226,

331,000. This will necessitate reducing the number of camps from 1,500 to 1,200.

Hearings on the Agricultural Appropriation bill were completed late in February, and the Appropriations Committee is expected to send the bill to the House shortly after the middle of March.

Supported by the signatures of twenty-five representatives in Congress, Congressman Lea of California introduced on February 21, a bill, H. R. 9580, to authorize the Secretary of Agriculture to use federal funds for the control of white pine blister rust upon all forest lands irrespective of ownership and to authorize such annual appropriations as may be necessary to prevent and eliminate the disease.

There has been no report on either of the McNary-Doxey sustained yield forest management bills—S. 3208 and H. R. 8950, or on the Wallgren bill, H. R. 4724, to create the Mount Olympus National Park in northwestern Washington. Reports from Representative Wallgren's office indicate that new proposals acceptable to the National Park Service, may be submitted to Congress as an amendment to H. R. 4724 rather than as a new bill. As last described the new boundaries would exclude the two corridors to the sea by way of the Soldue, Bogachiel, and Hoh Rivers, but will set up a separate seashore strip from a half-mile to two miles wide, extending from north of Ozette Lake south to a little above the village of Queets. The proposed strip, while including little federally owned land, embraces more than 30,000 acres of private land and about 5,000 acres of state land. Accordingly, a purchase program will need to be included.

The suitability and feasibility of extending the boundaries of the Grand Teton National Park in Wyoming, may again be given public hearings in the vicinity of Jackson Hole, Wyoming, if the Senate acts favorably on Senate Resolution 250 introduced by Senator O'Mahoney on March 11. The resolution directs the Senate Committee on Public Lands and Surveys to determine the attitude of the citizens of Teton County, Wyoming. This is the first evidence during the present Congress of efforts to revive the proposals of the past several Congresses to increase the area of this park. None of the bills dealing with the proposed park extension as introduced in the two preceding Congresses were acted upon, but the most complete study of the situation was made during August 1933 by a special investigating committee under the leadership of Senator Gerald P. Nye, of North Dakota.

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(Continued from page 150)

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As the choice rooms will naturally go to those making early reservations, members and their friends are urged to notify the Association, 919 Seventeenth Street, Northwest, Washington, D. C., immediately as to the number in their party, how they intend to arrive, and the type of rooms desired.

Trail Riders

(Continued from page 169)

Expedition No. 6—Olympic Wilderness, Olympic National Forest and Mount Olympus National Monument in Washington. Time, August 6 to August 19. Approximate cost, \$160 from Seattle, expedition headquarters. Vague and ethereal in the summer haze, this mountainous mass remains one of America's most alluring last primitive places. Dominated by Mount Olympus, this rugged, broken mass of peaks rises in majestic beauty over a hinterland of glaciers and virgin forests, surrounded on three sides by salt water. Truly a wildwood built on a grand scale.

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CONSERVATION CALENDAR

Important Bills in Congress With Action
February 11-March 8, 1938

BILLS ENACTED

S. 2583—McCARRAN—To provide for the acquisition of certain lands for and the addition thereof to the Tahoe National Forest in Nevada. Passed Senate August 10, 1937. Passed House February 2, 1938. Public Law No. 428.

H. R. 8505—JONES—To provide for the conservation of national soil resources and to provide an adequate and balanced flow of agricultural commodities in interstate and foreign commerce. Passed House December 10, 1937. Passed Senate amended December 17, 1937. Conference report agreed to in House and Senate February 9 and 14, 1938, respectively. Public Law No. 430.

H. R. 9306—TAYLOR, Colorado—First Deficiency Bill of 1938. Passed House February 4, 1938. Passed Senate amended February 25, 1938. Public Law No. 441.

APPROPRIATIONS

H. J. Res. 591—CANNON, Missouri—Making appropriations available for the control of outbreaks of insect pests. Introduced February 8, 1938. Passed House February 16, 1938. Passed Senate amended February 23, 1938. Senate agreed to House amendments to Senate amendment February 24, 1938.

H. J. Res. 606—EATON—To appropriate an additional \$3,000,000 for eradication of the Dutch elm disease in America. Introduced March 3, 1938. Referred to the Committee on Appropriations.

H. R. 8837—WOODRUM—Making appropriations for the Executive Office and sundry independent executive bureaus, boards, commissions, and offices, including the Civilian Conservation Corps and the Tennessee Valley Authority, for the fiscal year ending June 30, 1939. Passed House January 11, 1938. Passed Senate amended February 25, 1938. Sent to conference February 28, 1938.

H. R. 9544—McMILLAN—Making appropriations for the Departments of State and Justice and for the judiciary, and for the Departments of Commerce and Labor, for the fiscal year ending June 30, 1939. Passed House February 18, 1938. Reported with amendments (Report No. 1457) by Committee on Appropriations March 7, 1938.

H. R. 9621—TAYLOR, Colorado—Making appropriations for the Department of the Interior for the fiscal year ending June 30, 1939. Passed House March 2, 1938. Referred to Senate Committee on Appropriations March 3, 1938.

CONSERVATION

H. J. Res. 504—LUECKE, Michigan—To authorize compacts or agreements between the States bordering on the Great Lakes with respect to fishing in the waters of the Great Lakes, etc. Passed House February 21, 1938. Referred to Senate Committee on Commerce February 22, 1938.

GOVERNMENTAL FUNCTIONS

S. 3331—BYRNES—To provide for reorganizing agencies of the government, extending the classified civil service, establishing a General Auditing Office and a Department of Welfare, and for other purposes. Reported with amendments by the Senate Select Committee on Government Organization, February 15, 1938. Now under consideration in the Senate.

NATIONAL FORESTS

S. 3416—O'MAHONEY—Providing for the addition of certain lands to the Black Hills National Forest in Wyoming. Introduced February 7, 1938. Referred to the Committee on Public Lands and Surveys.

H. R. 9523—PIERCE (S. 3312—McNARY)—To add certain lands to the Ochoco National Forest, Oregon. Introduced February 16, 1938. Referred to the Committee on the Public Lands.

NATIONAL PARKS

S. 3560—BYRD—To revise the boundaries of the Colonial National Historical Park in Virginia, etc. Introduced February 28, 1938. Referred to the Committee on Public Lands and Surveys.

TREE DISEASES AND INSECTS

S. J. Res. 256—MURRAY (H. R. 9444—O'CONNOR, Montana)—To amend the Joint Resolution entitled "Joint Resolution making funds available for the control of incipient or emergency outbreaks of insect pests or plant diseases, etc.," approved April 6, 1937. Introduced February 10, 1938. Reported without amendment by the Committee on Agriculture and Forestry March 1, 1938.

S. 3492—JOHNSON, California (H. R. 9580—LEA)—To provide for forest protection against the white pine blister rust, and for other purposes. Introduced February 21, 1938. Referred to the Committee on Agriculture and Forestry.

WATER AND STREAM CONTROL

S. 3420—MILLER—To amend the Flood Control Act of June 15, 1936. Introduced February 8, 1938. Referred to the Committee on Commerce.

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Cypress Swamp

(Continued from page 161)

erty of the timber-right owner, to do with as he pleases.

The timber rights are owned by A. V. Waldoock of Idabel, a venerable lumberman of the hill country who paid eighty dollars, fifty years ago, for the concession on 160 acres. For fifty summers—excepting wet summers—he has been cutting cypress and hauling it out for shingles.

When first approached with the conservation idea, Mr. Waldoock was unresponsive. But Mr. Davis displayed his photographs, explaining the rarity of the timber and the rarity of the birds it protects and the lumberman was won over. He became enthusiastic about the program and agreed to sell his timber rights for what they cost him—eighty dollars.

So before this summer is over the valuable cypress swamp, so long overlooked, will be fully protected in every respect. The buzzard roosts of the Kiamichis will not be sliced into shingles.

President Moves to Solve Forest Problems

(Continued from page 159)

forest lands may be conducted as continuous operations, with the productivity of the lands built up against future requirements.

"3. The need for extension of Federal, State, and community ownership of forest lands, and of planned public management of them.

"4. The need for such public regulatory controls as will adequately protect private as well as the broad public interests in all forest lands.

"5. Methods and possibilities of employment in forestry work on private and public forest lands, and possibilities of liquidating such public expenditures as are or may be involved.

"Facilities of those technical agencies that, in the executive branches of the government, deal with the many phases of our forest problem will of course be available to such committee as the Congress may appoint. These technical agencies will be glad to assist the Committee in assembling and interpreting facts, indicating what has been done, what still needs to be done, and in such other ways as the Committee may desire.

"I make this suggestion for immediate study of our forest problem by the Congress in the belief that definite action should be taken by the Congress in 1939. States, communities and private capital can do much to help—but the fact remains that, with some outstanding exceptions, most of the states, communities and private companies have, on the whole, accomplished little to retard or check the continuing process of using up



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our forest resources without replacement. This being so, it seems obviously necessary to fall back on the last defensive line—Federal leadership and Federal action. Millions of Americans are today conscious of the threat. Public opinion asks that steps be taken to remove it.

"If the preliminary action is taken at this session of the Congress, I propose to address letters to the Governors of those States in which the amount of state and privately owned forest land is substantial, enclosing to them a copy of this Message to the Congress and asking their full cooperation with the Congress and with the Executive Branch of the National Government."

FRANKLIN D. ROOSEVELT.

Lumber Towns

(Continued from page 168)

in Michigan or Wisconsin, his classic excuse was: "Ay tank Ay yump dis yob an' go vork for Louie Sands."

There was a lot of cedar in the Muskegon woods and shingles were second only to lumber in importance. Shingle-weavers, as they were and are called, were a race apart, being neither loggers nor sawmill workers. Jack Mahoney, old-timer now of Bend, Oregon, who was born in Muskegon in its palmy days, recalls the weavers with affection.

"I've always said that shingle-weavers of those days were the greatest bunch of fellows ever connected with the lumber industry," Mr. Mahoney says. "They all made big money—from two to five dollars a day, which was really big pay in the Eighties and Nineties. The weavers spent their money as they made it. All they asked for was a run for it. They were a dressy bunch, many wearing white shirts and tailor-made clothes to work. Spring-bottom pants were in style; and all the weavers wore round-rimmed black hats. The hats were almost a badge of the weaver. But on special occasions many of them put on high plug hats made of silk, and Prince Albert coats. I don't think the lumber industry ever had such a dressy gang as the shingle-weavers of Muskegon."

Throughout the Eighties the mills around Muskegon lake grew in size and multiplied. In 1870 there were thirty-five of them. A decade later the number was forty-two. The prairie states were building up and they needed lumber. So the Muskegon plants increased their size and speed. They put on night shifts. Soon, a man could tell the time of day by his watch at any time during twenty-four hours; the burning piles of sawdust and slab, much of it excellent lumber, furnished the light. You could travel around the lake, which was eleven miles across, and not be out of sight or sound of lumber being made.

The peak came in 1888, when forty-eight sawmills made lumber out of the 900,000,000 feet of logs that came down Muskegon River that spring. In addi-

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tion, they turned out 92,000,000 shingles and 25,000,000 lath. In that year, and probably for a year or so before and after, Muskegon was the greatest sawmill city on earth.

By 1890 it was clear to all that the town had seen her greatest days. If the lay public didn't realize it, then the insurance companies did, for beginning in 1890 and continuing for five or six years, the lake was often lighted up by the flames of sawdust factories going up in smoke.

Skilled sawmill workers and shingleweavers began leaving Muskegon in 1891, and a year later the movement had become a migration. Many of the boys headed straight North, where they remained a few years on Michigan's Upper

Peninsula before they went down into the southern pine, or west to the Douglas fir country.

In the summer of 1905 came the end. The big sawmill of the Thayer Lumber Company cut its last board and was dismantled. All the other mills had gone before.

It wasn't the end of Muskegon. The city survives on other lines of business. But not anywhere will you see anything to tell you that in 1888 Muskegon cut almost a billion feet of lumber. That is, not unless you take a shovel and dig into the earth on what used to be The Flats. You won't dig very deep there until you strike into black and hard-packed sawdust. No man can say how deep it is, but it runs a long way down.

A HERETIC OPENS THE TROUT SEASON

(Continued from page 157)

lunch. Soon I had a brisk little fire blazing. From my pack I brought out a battered old coffee pot, a veteran of many fishing trips. Then came the frying pan, three cakes of hamburger mixed with onion, a glass of butter and other tools. Soon the coffee pot boiled and the incense of frying hamburger and hot coffee blended with the perfume of wood smoke. Back to a tree I ate slowly and with relish. It was a good meal, simple but ample.

Then I cleaned my trout very carefully and dug a little pit. In this I started another fire, and when it was blazing hotly, I dropped into it some sassafras roots I had gathered. The steaming aroma caught my nostrils and I pronounced it good. Then, with green twigs I wove a screen which I placed over the smoke and on this screen I placed my freshly cleaned trout. Ever eat lightly smoked trout? Then you have missed one of the most royal dishes in the world!

I rested a full two hours, smoked numerous pipes and even dozed a bit in the afternoon sun. Thoroughly refreshed I started to retrace my steps. Four medium sized trout looked upon the worm and the golden spinner with high and lusty approval and I netted three of them.

Then, as the shadows lengthened, I came to the pool where I knew the big fellow lived. It was getting late but I wanted to try him once more. I put on a fresh worm, an impudent, squirming fellow.

Slowly, time and again, I spun the golden spinner past the log. Once a minnow snapped at the lure and gave me a momentary thrill. No luck! I stripped in my line faster than usual, determined that I would call it a day. Just before the bait plopped out of the water I saw him rush from the opposite bank, snap at the bait and gracefully and arrogantly twist back to shelter.

My blood raced. Here I been trying for the log while the old chap was across stream! Well, I'd teach him a lesson! I waited five minutes. Then, nerves aquiver, I flipped my lure on the bank opposite. Raising my rod gently, the lure

dropped into the water almost without a splash. With fingers that trembled I stripped in line, a little at a time, jerkily and making the little spinner glow like a living thing. Out of nowhere came a savage thing of greenish silver and when I set my hook the little rod arched sharply. He was solidly hooked and the line burned my fingers as he dashed down stream.

Suddenly, without warning, he turned and darted toward me. I couldn't take in line fast enough and almost under my nose he leaped clear of the water, shaking his head savagely. Splash! Frantically I tightened my line. Miracle of miracles, he was still on! Down deep in the water he was trying to dislodge the stinging hook. Lustily his strong old tail smashed against the taut leader. I timed the beat of that tail, lessened the strain on the leader as he struck. He refused to budge. Carefully I reached down, found a stone

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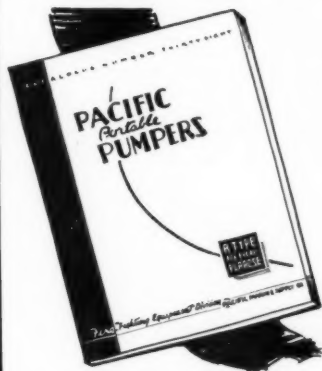
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and tossed it into the water. Then he moved! Into the air he came, head first, defiant, undefeated and thoroughly angry. Then he surged toward the shelter of the old log and I couldn't turn him.

He sulked, then tore across stream and back with astonishing speed. I stepped into the water with a vague idea that I could handle the situation much better. It was an error. My feet struck a slippery rock and I sat down. The shock made me angry but I managed to scramble to my feet and to hang onto my rod. Praise Allah, the trout was still there. But his strength was waning, his rushes were shorter. The old warrior was whipped.

I brought him in slowly and prayerfully and he looked at me innocently as I pushed the net toward him. Then, with the last remnant of his terrific strength, he leaped, dislodged the hook and dashed across the stream. But, so savage was his rush, that he literally beached himself in water less than an inch deep. I whooped, waded across, scooped my hands under him and heaved mightily. Back from the bank he struck the ground and he was still flopping when I pounced on him. He weighed four pounds.

The sun had gone down behind the hills and the wind was penetrating as I slogged heavily toward my car. But a shivering song was on my lips and I was happy. I had been a heretic for a day.

Next time I tramped Killwell I knew the sun would be hot. Then, armed with the tools of a dry fly purist, my dainty offerings would be presented in the conventional manner. But, regardless of the size of the creel I might then be fortunate enough to fill, I know it would contain nothing in the way of the thrills and the honest satisfaction this day had given me.

John Muir

(Continued from page 164)

fruit ranch where they made their home.

The ranch was part of the Strentzel land in the foothills near San Francisco Bay, which the father-in-law had turned over to them. For several years after their marriage Muir devoted the major part of his time to running the ranch, studying horticulture, and "digging and dibbling" in the soil. As a rancher he was successful enough to provide comfortably for his wife and two daughters. But the call of the wild was too strong; in a few years he sold part of the ranch, leased another part, and turned more and more to his mountains and forests.

Millions of acres of forest reserves were set aside in the '90's. But they were getting little more protection than they had received before. Under the Timber and Stone Act—Muir termed it the "Dust and Ashes Act"—speculators were being allowed to get hold of choice tracts of timber and to wreck them. There were many land frauds. Cattle and sheep overcrowded the ranges, without any regulation of the grazing.

"Only in darkness does vandalism flourish," said John Muir, and in two ar-

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ties of far-reaching importance in 1897 he brought this situation into the light. His article on the forest reservations, published in *Harper's Weekly* of June 5, 1897, and "The American Forests" which appeared in the *Atlantic Monthly* of August turned the tide of public opinion. John Muir became an acknowledged leader of the conservation movement.

"Every other civilized nation in the world has been compelled to take care of its forests," he cried, "and so must we if waste and destruction are not to go on to the bitter end."



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Sequoia grove. The majestic trunks, beautiful in color and in symmetry, rose round us like the pillars of a mightier cathedral than ever was conceived even by the fervor of the Middle Ages. Hermit thrushes sang beautifully in the evening, and again, with a burst of wonderful music, at dawn.

"I was interested and a little surprised to find that, unlike John Burroughs, John Muir cared little for birds or bird songs, and knew little about them. The hermit thrushes meant nothing to him, the trees and the flowers and the cliffs everything. The only birds he noticed or cared for were some that were very conspicuous, such as the water-ousels—always particular favorites of mine too. The second night we camped in a snow-storm, on the edge of the canon walls, under the spreading limbs of a grove of mighty silver fir; and next day we went down into the wonderland of the valley itself. I shall always be glad that I was in the Yosemite with John Muir. . . ."

During the next six years of Roosevelt's presidency, 148,000,000 acres of additional forest reserves and five new parks were set aside.

The creation of the United States Forest Service in 1905 meant the realization of much that John Muir had advocated. The Forest Service was placed in charge of the forest reserves, and trained foresters, inspired by high ideals of public service, went into them to put into effect scientific practices for a sustained yield of timber, to set up regulation of grazing, combat the fires, and bring about efficient land management. The forest reserves became the National Forests which today embrace more than 170,000,000 acres of publicly owned land, managed under the guiding principle laid down in 1905 of conservation by wise use, "for the greatest good of the greatest number of people in the long run."

Honors came to John Muir: Fellow of the American Association for the Advancement of Science; honorary degrees from Harvard, Wisconsin, Yale and California Universities. Harvard and Massachusetts Institute of Technology offered him chairs, but he had no desire for a "profship." He remained an unpretentious, engaging man, living simply, close to his beloved woods and mountains. He had many friends. David Starr Jordan said of him: "The impression of his personality was so strong on those who knew him that all words seem cheap beside it."

John Muir died on Christmas Eve, 1914. He was buried by his wife on their ranch near Martinez.

To the end he had continued to preach the duty of handling our resources wisely, of so using the country we live in "that we may not leave it ravished by greed and ignorance, but may pass it on to future generations undiminished in richness and beauty."

"Everybody needs beauty as well as bread," he had declared, "places to play in and pray in, where nature may heal and cheer and give strength to body and soul."

WHO'S WHO

Among the Authors in This Issue

NORMAN B. LIVERMORE (*Roads Running Wild*) writes from San Francisco. A Stanford man of the class of '33, Mr. Livermore did graduate work at Harvard. A lover of the high Sierras, he has made many pack trips into the California mountains. In 1936 he made a special trip to the Himalayas, in order to enrich his wilderness experiences with a pack trip in a foreign and distant land.

HARRY BOTSFORD (*A Heretic Opens the Trout Season*) admits that he was



Harry Botsford

born in the "gay Nineties" and has had a grand time ever since. Steeped in Waltonian lore, he is ambitious to own "well stocked cabins on all streams and lakes in the United States and Canada where there is good fishing." Outside of this and several other ambitions equally as modest, he has written two books, many magazine articles, loves his home in the country near Titusville, Pennsylvania, and can tell you—to a day—the interval between this and the opening of the trout season.

BARON CREAGER (*Cypress Swamps of the Kiamichis*), a newspaper man of long standing, lives at Tulsa, Oklahoma. An outdoor enthusiast, his hobby is fly fishing.

CHARLES EDGAR RANDALL (*John Muir—Man of the Mountains*) is Editor of the United States Forest Service, at Washington, D. C. He formerly taught botany at the Oregon University of Agriculture. A Stanford man, he knows his California and the high Sierras—that country so loved by John Muir.

STEWART H. HOLBROOK (*Historic Lumber Towns*) continues his series of virile stories on pioneer logging towns. Here he follows the ax-men in their migration into the Lake States to Muskegon, Michigan—a world-beater in cutting lumber. Down the old Muskegon came magnificent pine logs from a forest that seemed endless and with their story runs that of the vigorous men who did so much to speed the conversion into logs of the great virgin forests of the region. Mr. Holbrook writes from Portland, Oregon, and his work is known from coast to coast.

THE COVER — Harbinger of Spring. Photograph by H. Armstrong Roberts.

SELECTED BOOKS ON FORESTRY AND RELATED FIELDS OF CONSERVATION



TREES

Manual of Trees of North America—Sargent.....	\$ 5.00
Trees of Northern States and Canada—Hough.....	6.00
Our Trees—How to Know Them—Emerson & Weed.....	2.75
Pacific Coast Trees—McMinn and Maino.....	3.50
Trees of North America—The Conifers—Green.....	2.00
Trees of North America—The Broadleaves—Green.....	3.50
Northern Rocky Mountain Trees—Kirkwood.....	2.50
American Trees and Shrubs—Mathews.....	3.50
Tree Book—Rogers.....	5.00
Big Trees—Fry and White.....	2.00
Trees in Winter—Blakeslee and Jarvis.....	2.00
Tree Ancestors—Berry.....	3.00
Tree Flowers of Forest, Park, and Street—Rogers.....	7.50
Some American Trees—Werthner.....	5.00
The Redwoods of Coast and Sierra—Shirley.....	1.25
Identification of Trees and Shrubs—Makins.....	4.00
Evergreens—Hill.....	3.50
Book of Shrubs—Hottes.....	3.00
Trees of Yosemite—Tresidder.....	2.00
Field Manual of Trees—Schaffner.....	1.50

GENERAL FORESTRY

General Forestry—Brown.....	\$ 3.25
An Outline of General Forestry—Illick.....	.75
Forest Education—Graves and Guise.....	2.50
Profession of Forestry—Read.....	1.50
Forest Law in America—Kinney.....	2.25
German Forestry—Heske.....	3.00

FOREST MANAGEMENT

Forest Management—Recknagel, et al.....	\$ 3.50
Theory and Practice of Silviculture—Baker.....	5.00
Practice of Silviculture—Hawley.....	3.00
Manual of Forestry—Hawley and Hawes.....	3.50
Forest Management—Chapman.....	3.50
Management of American Forests—Mathews.....	5.00
Applied Silviculture in the U. S. A.—Westveld.....	4.00
Farm Forestry—Ferguson.....	2.00
Forest Protection—Hawley.....	2.75

MENSURATION AND VALUATION

Manual for Northern Woodsmen—Cary.....	\$ 3.00
Forest Mensuration—Chapman and Demeritt.....	3.50
Forest Mensuration—Bruce and Schumacher.....	3.50
Forest Finance—Chapman.....	3.50

WOOD—ITS MANUFACTURE AND USE

American Lumber Industry—Brown.....	\$ 3.00
Forest Products—Brown.....	4.00
Lumber, Its Manufacture and Distribution—Bryant.....	4.50
Logging Principles and Practices—Brown.....	3.50
Air Seasoning and Kiln Drying of Wood—Henderson.....	3.50
Identification of Economic Woods—Record.....	2.50
Mechanical Properties of Wood—Garrett.....	3.50
Identification of Timbers—Brown and Panshin.....	3.00
The Properties and Uses of Wood—Koechler.....	3.50

PLANTING OF TREES AND FORESTS

Seeding and Planting—Toumey and Korstian.....	\$ 5.00
Cultivated Conifers—Bailey.....	7.50
The Modern Nursery—Laurie and Chadwick.....	5.00

FOREST PESTS

Principles of Forest Entomology—Graham.....	\$ 3.50
Outline of Forest Pathology—Hubert.....	6.00
Insects and Diseases—Felt and Rankin.....	5.00
Diseases of Cultivated Trees and Plants—Massee.....	4.00
Forest Insects—Doane, et al.....	4.50

NATIONAL FORESTS

History of Forest Service—Smith.....	\$ 2.00
Our National Forests—Boerker.....	2.50

NATIONAL PARKS

Book of the National Parks—Yard.....	\$ 3.00
Grand Canyon Country—Tillotson and Taylor.....	2.00
The Great Smoky Mountains—Thornborough.....	2.00
Oh, Ranger—Albright.....	2.50
One Hundred Years in Yosemite—Russell.....	3.50
High Trails of Glacier National Park—Thompson.....	3.00

CAMPING AND RECREATION

Camp Cookery—Kephart.....	\$ 2.50
Campers' Handbook—Wallace.....	2.00
Handbook for Rangers and Woodsmen—Taylor.....	3.00
The Real Log Cabin—Aldrich.....	3.00
Wisdom of the Woods—Beard.....	2.50

BIRDS, WILDLIFE, FISHING AND HUNTING

Handbook of Birds of North America—Chapman.....	\$ 5.00
Adventures in Bird Protection—Pearson.....	3.50
Bobwhite Quail—Stoddard.....	6.00
Game Management—Leopold.....	5.00
Animals of North America—Anthony.....	1.98
Field Book of Wild Birds—Mathews.....	3.50
Animal Life in Yellowstone—Bailey.....	4.00
American Food and Game Fishes.....	5.00
American Fishes—Goode.....	6.00
Birds of America—Pearson, et al.....	3.95
The Reptiles of North America—Ditmars.....	6.75
Wild Animals—Beard.....	3.00

FLOWERS AND GARDENING

American Wild Flowers—Mathews.....	\$ 3.50
Wild Flowers—House.....	3.95
Field Book of Western Wild Flowers—Armstrong.....	3.50
Flora of the Pacific States—Abrams.....	9.00
Rocky Mountain Flowers—Clements.....	3.50
Ferns of Northeastern United States—Wiley.....	1.00
Field Book of Common Ferns—Durand.....	2.50
The Mushroom Handbook—Krieger.....	3.50
Field Book of Illinois Wild Flowers.....	1.50
Spring Flowers of Minnesota—Rosendahl.....	1.00
Cyclopedia of Horticulture—Bailey.....	15.00
Problems of a Rock Garden—Wilder.....	1.98

MISCELLANEOUS

Our Natural Resources—Parkins et al.....	\$ 5.00
How Plants Get Their Names—Bailey.....	2.25
Conservation—Havemeyer and Van Hise.....	5.50
Soil Erosion and Its Control—Ayres.....	3.50
Tree Crops—Smith.....	1.49
Ranger Trails—Riis.....	2.00
A Continent Lost—A Civilization Won—Kinney.....	4.00

This list of Selected Books is a service of The American Forestry Association to its members. Prices quoted are not guaranteed, but to the best of our knowledge are correct. A more complete list of recommended books is available on request. Members ordering books through the Association are entitled to a 10% discount from published prices.

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